

Italian Breeders Association

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Puma Project

Generalities

3 April 2002 Revision 1.1



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Description of the project

PUMA project (**P**rocedura **U**nica **M**ultispecie degli **A**llevatori- Breeders Multispecies Procedure) aims to optimize and develop, through the use of **Internet**, the information management of data coming from Milk recording and Technical Assistance.

Puma project, made by AIA with the contribution and efforts of Puma Team Work and born inside ARA's council, represents a strategic project for the 2000. Puma is the third project realized by AIA for improving the information management of Milk recording data.

The first one was made in the 60'/70' .It enabled all recorded Breeders to have a monthly schedule (AIA Pre-printed) which reported productive and reproductive data for each cow, up-to-date latest recording.

In the 80'/90', the second modernization project, called Uniallevatori, carried out the following strategic aims:

- Define informatic standards for AIA-ANA-APA fluxes;
- Manage local data with standard rules and procedures;
- Give informatic tools to the inspectors in order to obtain the data of the breeding and to let the inspector issue a certificate to the breeder with the recording results:
- Give informatic tools to the Breeders for a better management of their herds.

PUMA project's aim are:

- Establish a single Data Base for all kind of species and races;
- Make use of a relational DBMS for the Data Base management;
- Create a client-server application, using Internet;
- Standardize the management of the data in order to simplify users' work;
- Razionalize central and peripherical procedures;
- Fix new development standards;
- No waste of resources in the autonomous development of similar procedures;
- Obtain a more flexible procedure that would be able to receive the news in the most quickly way;
- Obtain a procedure supported by documentary evidence for each single phase (planning, analysis, development, test, maintenance);
- Bring the informatic developmente back to the Associations;
- Make a better use of the available human resources;
- Create a territorial human-net in order to assure diffusion and assistance;
- Reach the utmost flexibility in supplying informations to different kinds of users.



Subdivision of the project in Modulus

PUMA project is subdivided in two main modulus:



The **DB Modulus** (Data Base) is a system which manage all the informations derived from the Functional Cheks (CCFF) and Technical Assistance (AT), based on a Central Data Base, available on Internet.

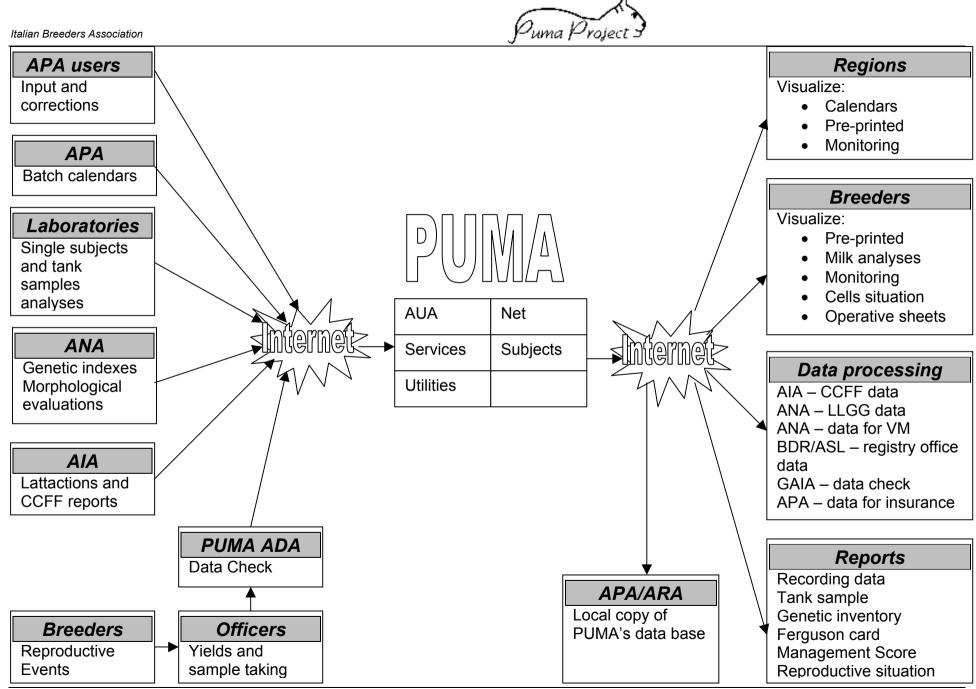
Puma DB modulus is subdivided in Functional Modulus and each of them manage single groups of informations:

- **Puma Utility** Utility functions, like management of the users;
- **Puma AUA** management of the Unified Breeders Registry Office;
- Puma Services management of services offered and given to the Breeders;
- *Puma Subjects* productive and reproductive informations (regarding animals) management.
- **Puma ADA** additional management of the Central Data Base's feeding. This management occur through a specific local modulus which allows inspectors and/or breeders to gather informations directly from the farm, if Internet connections doesn't not yet exist.
- **Puma PAI** additional management connected with the use of Puma ADA, that allows an exchange of informations between **Puma ADA** and **Puma DB** through an Internet Access Point (PAI).



Net Modulus (InterNet) is an Internet data publication system (Datawarehouse).

Its aim is supplying the breeders and the authorized users (like technicist, provincial officials, government officials), in a quickly and simply way, with the informations obtained from Puma DB and from other external sources.





Functionalities and Structure

Puma DB

Functionalities

DB Modulus (Data Base) is the feeding system of the Central Data Base management, through Internet. Its main aim is the collection of all official Milk recording data and Technical Assistance information.

The *Single Data Base* sources are:

- **Puma Users** (Recording officers, APA Technicist, Breeders) through an Internet Access Point (PAI).
- Recording officers Users, thanks to their PC or Psion, they obtain data directly from the farm through the local procedure PUMA ADA (Acquisizione Dati Allevamento-Data Acquisitions in Farms); in this way they feed the Single Data Base with the use of Internet and Puma PAI modulus.
- Laboratories: they can send analyses results directly to the Single Data Base.

APA can automatically make a local copy of the single database, could *Replay*. Only data referring to its province will be available. Only sending new and/or changed information, local copies will be brought up to date.

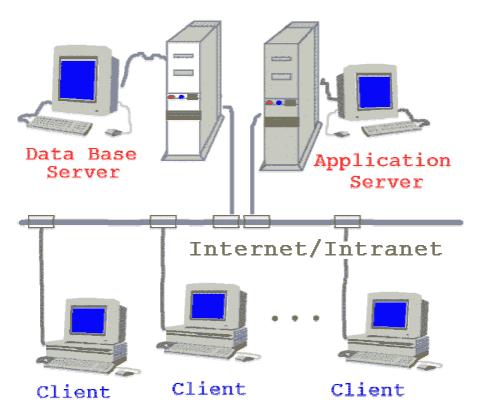
The outcomes of the consultations can be downloaded and organized in electronic sheets or, in other informatic tools chosen by the user.



Structure

Puma DB Modulus is a three levels Client-server application (User Services, Business Services, Data Services):

- User Services (U.S.) are the modulus interface that allow users to explore the Data Base information and transform user's requests in Data Base queries.
- **Business Services** (B.S.) are program modulus that perform the duties of access in the Data Base, both for data selection and for data input or alteration. At this level it's possible to fix bonds and rules that the Data Base must respect.
- **Data Services** (D.S.) are services given by RDBMS, that contain the rules and bonds implementated in the Data Base builinding.





Puma ADA and Puma PAI

Puma ADA

Functionalities

ADA Modulus (Acquisizione Dati in Allevamento) is a local single-user application that enable the data collection directly from the breeding-farm.

Puma-ADA is going to develop a PSION PDA's version (**Puma-ADA**^p) and a Windows version, especially for laptop (**Puma-ADA**^w).

Only **Puma-ADA**^p (PSION) gives the possibility to input data directly in the milking parlour.

Puma-ADA will also acquire productive data directly from electronic systems (lactometers).

The two versions of Puma-ADA can of course switch over and have the same functionalities, and, depending on the technical charachteristics, the same *operativity*.

Both versions are able to point out not only the productive but also the reproductive data concerned all species managed by PUMA (cattle, sheap, goat), whatever their production may be (milk, meat).

Puma-ADA allows the inputing of data by more the one recording officer when it is necessary (for example when the breeding is very big).

In any case, both version of **Puma-Ada** have a temporary data base, that must be fed by an official situation before obtaining new information and must be lined up after every data mailing to **Puma-DB**.

The **Puma-DB** modulus check both the modality and the obligatoriness of the alignment. The data-exchange between **Puma-DB** and **Puma-ADA** is possibile through an Internet Access Point and through different Windows Environments functionalities for Laptop, called **Puma-PAI.**

Puma PAI

Functionalities

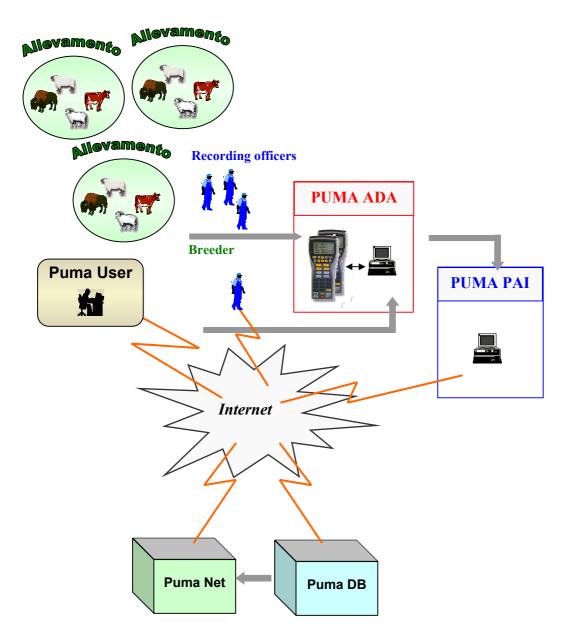
PAI Modulus (Punto di Accesso ad Internet) is a local single-user application that let the ADA and DB modulus comunicate. PAI modulus duties are:

- Obtain the firm's situations sended by Puma DB and feeding Puma ADA by these;
- Send to Puma DB the data obtained by Puma ADA.

Puma-PAI is made for personal computer in Windows environments.

Structure







Puma Net

Functionalities

With the PUMA Net modulus it is possibile to put in Internet Milk recording and Technical Assistance data. These data can be published both in aggregate and in disaggregate form, using the data warehousing tools.

The published data regards:

- a) The outcomes of the Milk recording official elaborations: pre-printed and operative sheets (now available only for cattle).
- b) A set of indicators and zootechnical firm parameters (now 64) make it possible to analyse the state of a single breeding. These indicators and parameter are calculated every month through the screening of data obtained by Milk recording or by other corporations.
- c) A data warehouse that uses the same zootechnical firm parameters quoted in point b) and supplies information grouped by the following criterias:
 - Region-Province;
 - Year-Month;
 - Altimetrical zone (plain, hill, mountain);
 - Firm registration to official Milk recording and Technical Assistance services;
 - Prevalent race in the breeding;
 - Farm dimension (according to the number of the animals and species the breedingfarms are subdivided in small, medium and big).

Each data can be downloaded in spread-sheet form.

In the data schedule, with the help of different colors, are underlined the zootechnical parameters that are different from the range of acceptability. The different colours are defined considering the possibility of increasing or decreasing in the parameter value.

Some data warehousing tools make it possibile to display zootechnical parameters with tables and graphs. This parameters can also be modified in a dynamic way starting just from the tables and graphs.

Structure

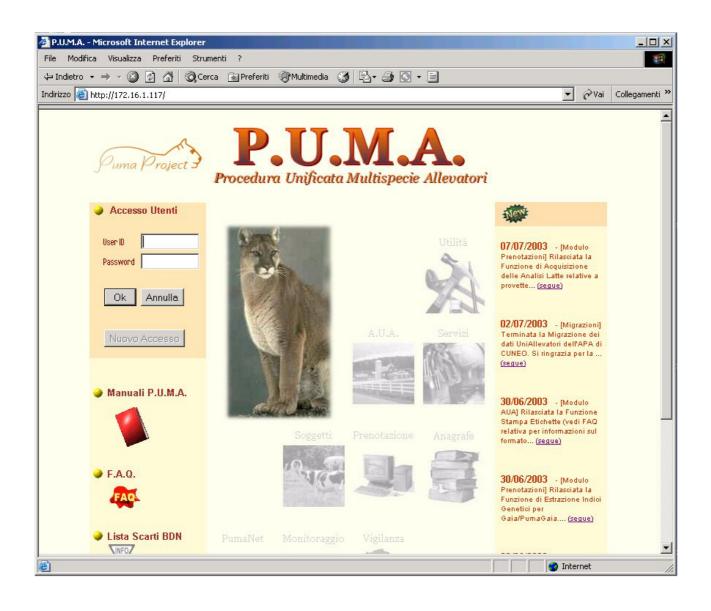
The PUMA Net structure is made by:

- Web-server with htlm pages;
- Application server with Sas 8 for Windows 2000, that contains both logical and data part.



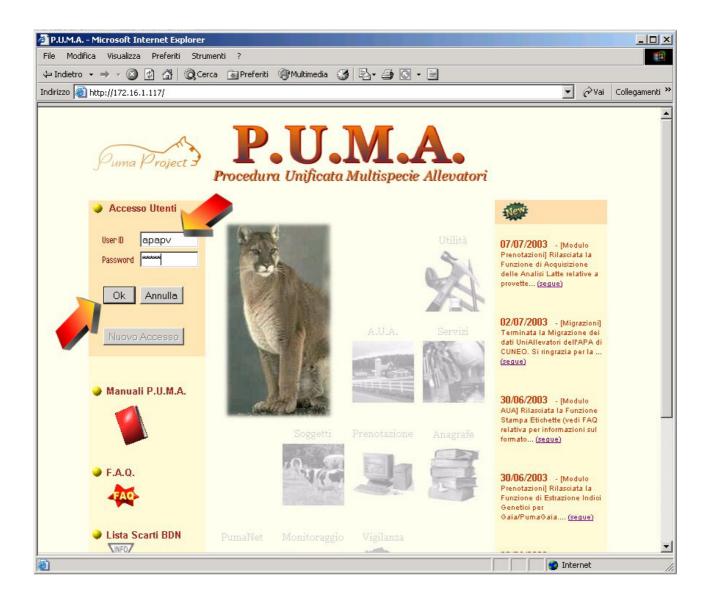
Access to the system

The **Puma** home-page can be accessed at the following internet address <u>www.puma-project.it</u>.





It is necessary to be a **Puma** user and have an user ID and password to enter in the **Puma** environment. After entered the user ID and password it is possible to access into the Puma procedures.





Dynamic menu

The menu are dynamic: this means that they can be personalized depending on the permission that the user has for the differnet functions.

The user's forbidden functions aren't displayed in the list of menu choices.

