OPEN SOURCE SOFTWARE FOR AGRICULTURE

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Abstract

In the current economic crisis, reducing costs is a primary goal. One widely used method today is to replace proprietary software with free or open source software. In this paper I refer primarily to the open source software's because they can be tailored to specific needs of each user. A report by the Standish Group states that adoption of open-source software models has resulted in savings of about $60 billion per year to consumers.

Key words: agriculture, farm, open source software.

INTRODUCTION

Open-source software is computer software that is available in source code form: the source code and certain other rights normally reserved to copyright holders are provided under an open-source license that permits users to study, change, improve and at times also to distribute the software.

Open source software is very often developed in a public, collaborative manner. Open-source software is the most prominent example of open-source development and often compared to (technically defined) user-generated content or (legally defined) open content movements.

Unlike proprietary off-the-shelf software, which comes with restrictive copyright licenses, open-source software can be given away for no charge. This means that its creators cannot require each user to pay a license fee to fund development. Instead, a number of alternative models for funding its development have emerged. Companies may employ developers to work on open-source projects that are useful to the company's infrastructure: in this case, it is developed not as a product to be sold but as a sort of shared public utility.

The top four reasons individuals or organizations choose open-source software are: 1) lower cost, 2) security, 3) no vendor 'lock in', and 4) better quality. Many open-source software projects have begun as research projects within universities, as personal projects of students or professors, or as tools to aid scientific research.

From this work were excluded general purpose software for office (such as OpenOffice) and programs can be adapted for agriculture but are not specifically designed for this (such as Adempiere or Weberp).

MATERIAL AND METHOD

The first stage consisted of searching for open source software on the Internet. If the software had an online version published, that version was tested. Otherwise, the program was installed on a PC with Intel i5 processor, 4GB RAM and operating system Win 7 64 bit.

RESULTS AND DISSCUSIONS

myCrop [http://mycrop.oncrete.gr/] is a little application intended for farmers. It can collect and manage data for

- farm fields,
- crop types,
- crops per farm field
- the yield of each crop.

It can also collect and manage data for any kind of application on these crops like

- watering
- pruning
- fertilising
- pesticide application etc.

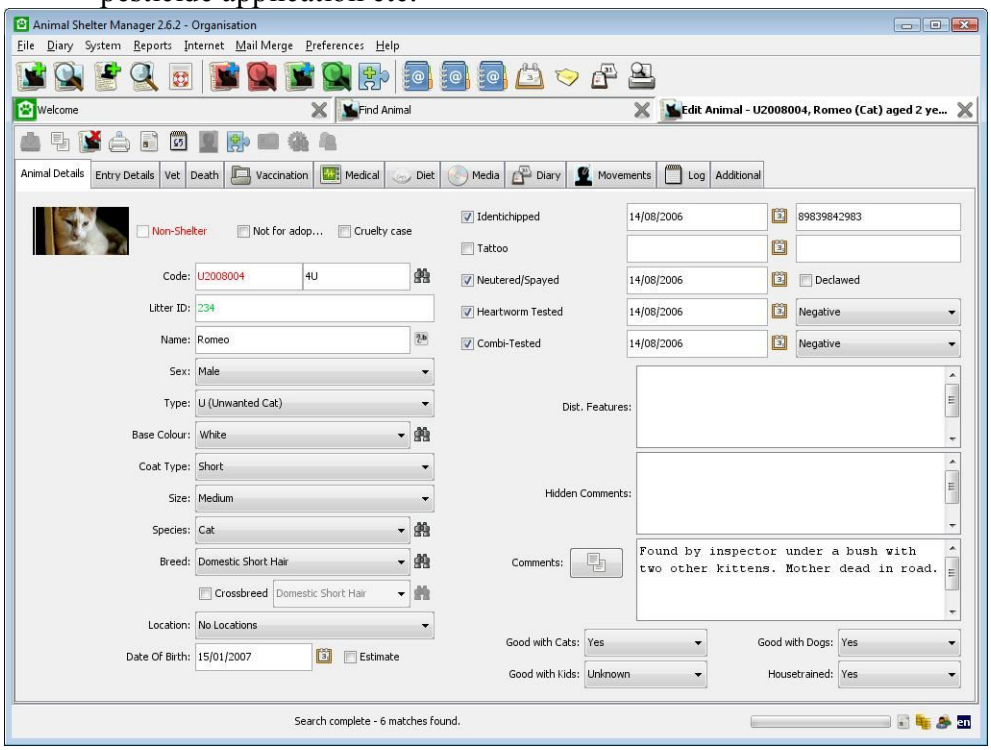

Figure 1. Main interface of Animal Shelter Manager software

Animal Shelter Manager [http://sheltermanager.sourceforge.net/home.php] is a feature-packed, open source computer package. It is designed to manage all aspects of an animal shelter, including intake, adoptions, internet publishing, medical treatments, diary, reporting, accounts, etc. The system is very flexible and can be configured to match the workflow of any shelter. It can be installed locally on computer or on a webserver for shared use by many people. The main disadvantage is lack of Romanian language and localization for Romania. Figure 1 shows the main interface of the software.

The aim of Openfield software [http://sourceforge.net/projects/openfield/ and http://www.coaginnovacion.org/] is to enable farmers to control a computer application that gives them a greater degree of control over this operation and therefore greater independence and judgment in decisions to undertake and on external advisory services. It allows an integral management of agricultural holdings by their owners, including modules for the analysis of costs of production, the calculation of revenue and expenditure, the keeping of the accounting, billing, traceability, the history of fertilisers and phytosanitary treatments, technical monitoring of the property, etc..

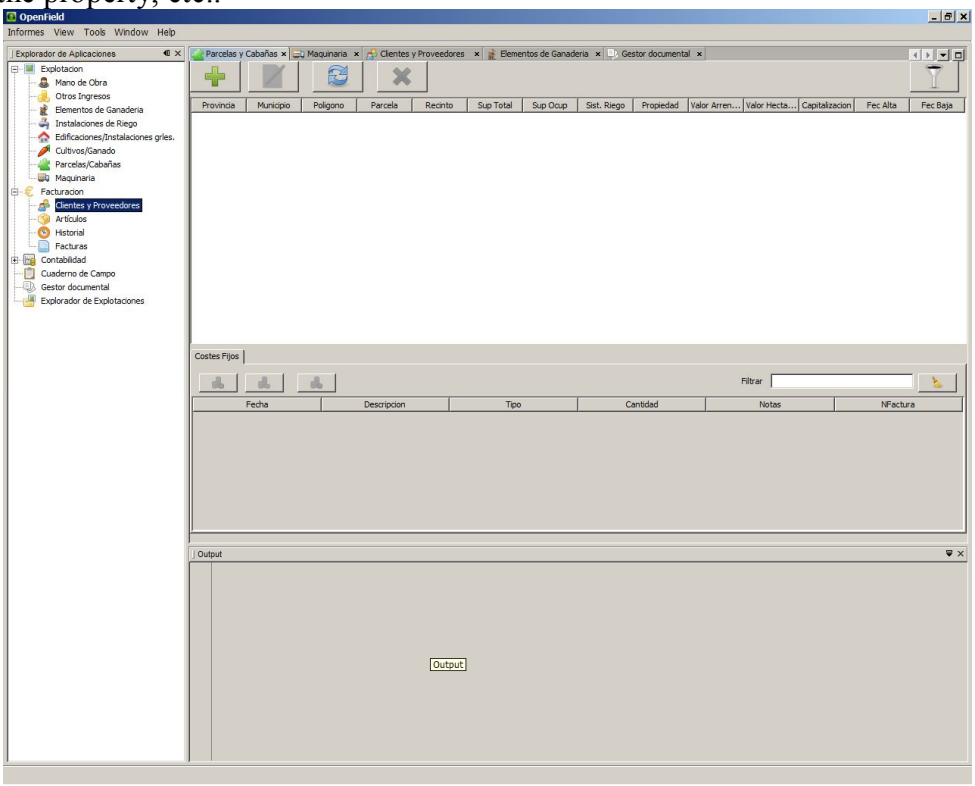

Figure 2. Openfield software interface

IDAO is a multimedia approach to computer aided identification, designed to eliminate the difficulty encountered by non-botanists when identifying species of plants made. IDAO was selected to be a part of the global PlantNet project. I tested Oscar open source application which is based on IDAO for weed species of Indo-Gangetic plains.

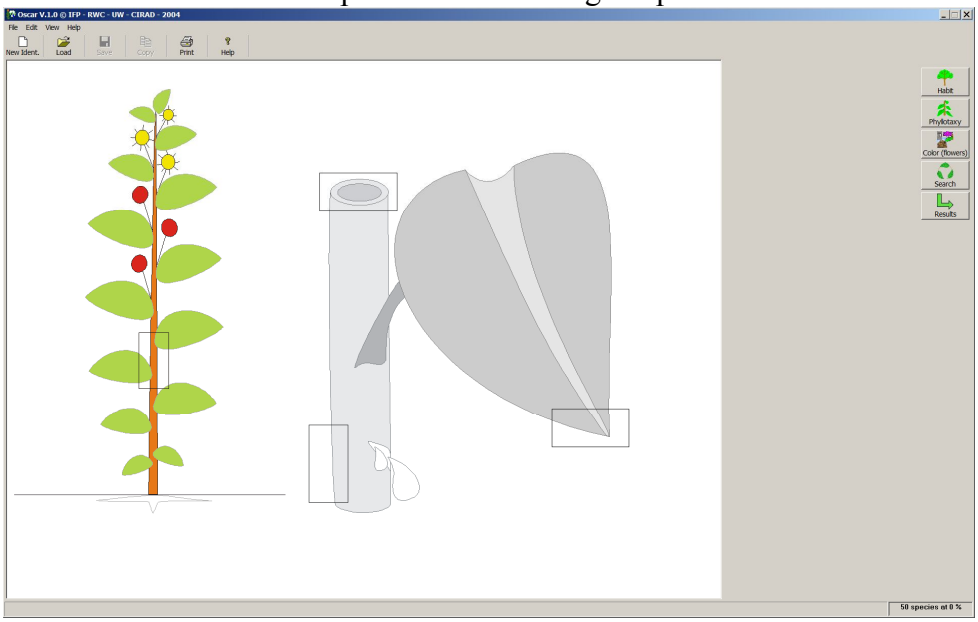

Figure 3. Oscar application based on IDAO software

CONCLUSIONS

Unfortunately, there are very few open source application designed specifically for the agriculture. Even these few, they are hard to find.

It is important to follow Plantnet project because it has another test version of open source software called PlantNote.

From applications now considered as the most useful is IDAO, which must be translated and adapted to our area.

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