



USER MANUAL

v 1.0 beta

By: Josep Domingo-Ferrer, Agustí Solanas and Úrsula González-Nicolás

Universitat Rovira i Virgili

Dept. of Computer Engineering and Maths



*Chair in
Data Priv@cy*

<http://unescoprivacychair.urv.cat>

November 2008



<http://unescoprivacychair.urv.cat>

GooPIR allows you to disguise your searched keywords by adding to each of them a number of masking keywords before submitting your query to Google. These masking keywords are chosen so that they have a frequency similar to the target keywords.

GooPIR can be used from Windows and UNIX.

INDEX

1.	Introduction	3
2.	Installation	3
3.	Search environment	4
4.	Search	5
5.	Configuration	6
6.	Shortcut to change the number of masking keywords	6
7.	Search Details	7
8.	Help	8

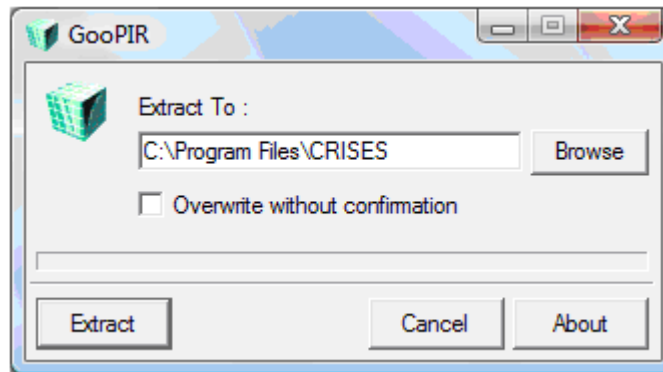
1. Introduction

This manual will guide you through the basic functionalities of GooPIR. If you want to know more about GooPIR and its internal operation please refer to the article [Josep Domingo-Ferrer, Agusti Solanas and Jordi Castellà-Roca, “h\(k\)-Private Information Retrieval from Privacy-Uncooperative Queryable Databases”, Online Information Review \(to appear\).](#)

2. Installation

Windows:

- a. Download the file “GOOPIR.exe”.
- b. When you open the file, a window similar to this one will appear:



- c. Select the folder where you want to extract the program and click on the “*Extract*” button.
- d. A folder called CRISES will be created. Inside, you will find:
 - An executable file called “goopir.exe”.
 - A folder called “files”.
 - The user manual in English (manual_eng.pdf) and Catalan (manual_cat.pdf).
 - The article “*h(k)-Private Information Retrieval from Privacy-Uncooperative Queryable Databases*” (GooPIRv10.pdf).
- e. Double-click on the executable file to run the program.

Linux:

- a. Download the file “GOOPIR.tar.gz”.
- b. If you do not have Java in your machine, you need to install the following packages: *sun-java6-bin*, *sun-java6-jre* and *sun-java6-jdk*.
- c. Extract the files from the compressed file. You will get:
 - A JAR file called “goopir.jar”.
 - A folder called “fields”.
 - The user manual in English (manual_eng.pdf) and Catalan (manual_cat.pdf).
 - The article “*h(k)-Private Information Retrieval from Privacy-Uncooperative Queryable Databases*” (GooPIRv10.pdf).
- d. Execute the JAR file by typing on a command window: `java -jar goopir.jar`.

3. Search environment

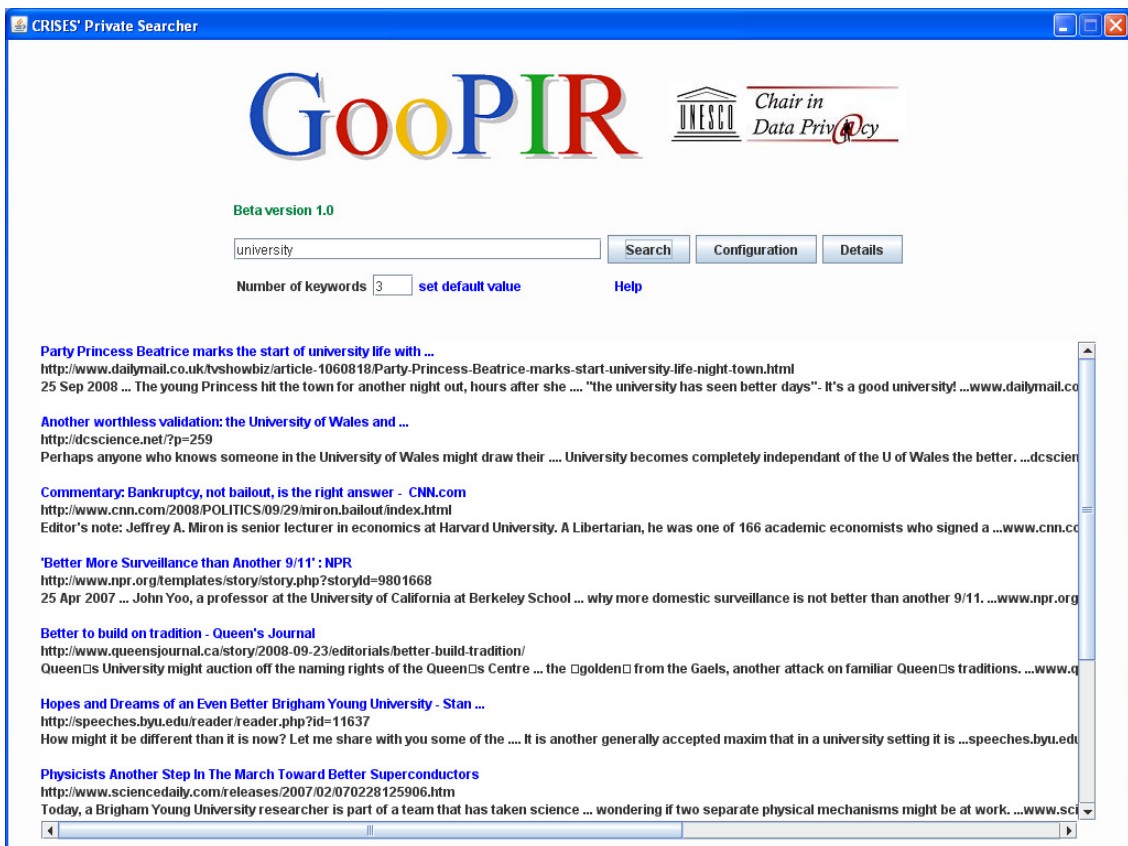
When you start the program the following window will appear, which is composed by a set of elements:



4. Search

Making a search with GooPIR is really similar to directly using Google. You need to introduce one or a set of words in the search bar and click the “*Search*” button.

Once this is done, the query results will be shown. Clicking on a title of a result (in blue) will open a new window from your browser and will redirect you to the corresponding webpage.

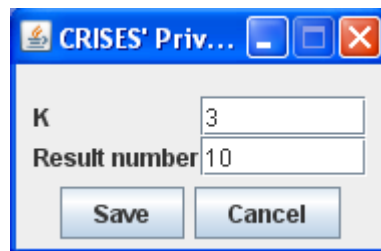


5. Configuration

By clicking on the “*Configuration*” button you access the configuration window, which allows modifying the number of masking search keywords (K) and the number of results you want to obtain.



A screenshot of a search interface. At the top, there is a search bar, a "Search" button, a "Configuration" button (circled in red), and a "Details" button. Below the search bar, there is a text input field containing the number "3", followed by the text "set default value" and a "Help" button.



A screenshot of a configuration dialog box titled "CRISES' Priv...". It contains two input fields: "K" with the value "3" and "Result number" with the value "10". Below the input fields are "Save" and "Cancel" buttons.

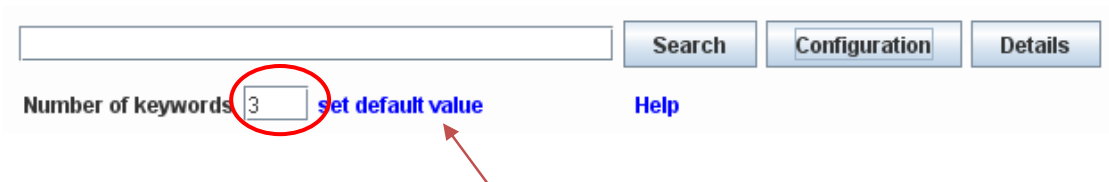
Once the search parameters are configured, click on the “*Save*” button to keep the changes or “*Cancel*” to exit without saving.

6. Shortcut to change the number of masking keywords

To speed up the search, there is the possibility to dynamically change the number of masking keywords without entering the configuration window. This is done through a text field situated under the search bar.

This way you will be able to change this parameter in an easier way, depending on the search, and control at any moment the value that is being used.

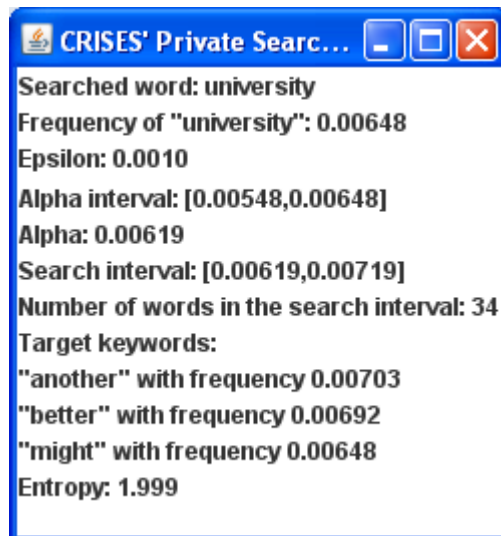
You can always go back to the default value which is in the configuration file by clicking on “*Set default value*”.



A screenshot of the search interface. The search bar is empty. Below it, the text "Number of keywords" is followed by an input field containing "3", which is circled in red. To the right of the input field is the text "set default value" and a "Help" button. A red arrow points from the "set default value" text back to the input field.

7. Search Details

Once the search is finished you can see some of its details, like the entropy for an intruder and/or the search engine, the frequency of the searched word or set of words and the added masking keywords.



8. Help

When clicking on “*Help*” a window with a brief description of the GooPIR functionality will appear, together with the current version and the date of the last modification.



Number of keywords [set default value](#) [Help](#)

