



## INTERNATIONAL CENTRE FOR POLITICAL VIOLENCE AND TERRORISM RESEARCH

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# Global Pathfinder II User Guide

### **Background:**

The Global Pathfinder II is a second generation data management system being developed in-house by ICPVTR. This is to replace the Distillery supplied InterQuest which ICPVTR is currently using. The project was conceptualized due to a number of difficulties encountered by the users (both analysts at ICPVTR and clients) in using InterQuest. InterQuest was found to be extremely unfriendly for users, it had limited utility beyond storing data, did not have functions to retrieve data in usable formats and has been extremely expensive to maintain. While designing the new system, all these issues, based on extensive feedback from the users, are being taken care of.

The entire money for development of this system has come from a generous grant by World-Check under the “**IDSS/ICPVTR – World-Check Fellowship**” project. The total amount committed by World-Check is USD 60,000 to be used in two years from March 2007. World-Check has also committed to extend the same after two years after a review. The money from World-check is being used to pay for the salary of the IT specialist (IDSS/ICPVTR – World-Check Fellow).

In the last one year and under the constant guidance of AP Lim Ee Peng from the School of Computer Engineering, all the work relating to the development of the new system has been completed. The new system is almost ready for use as soon as the hardware required to run the system is procured. Any new IT related system requires a testing period of about six to twelve months to stabilise. In the next year, the IT specialist will monitor the use, and design and develop additional features that will make it significantly different and more user-friendly than InterQuest. I want to emphasize that without the support of AP Ee Peng, (who participated in almost all the weekly review and development sessions with us), it would not have been possible to develop the system in its current form so quickly.



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### **Introduction**

The following section gives a brief overview of the Global Pathfinder II

#### **Global Pathfinder II**

- **What is it?**

Global Pathfinder II is designed to be a counterterrorist data warehouse and to provide rich functional interfaces to navigate and analyse the data stored in it.

- **What is it capable of doing?**

The interfaces of Global Pathfinder II can be divided into 3 types; searching data, manipulating data and analysing data.

There are three searching interfaces in Global Pathfinder II. The first is global searching interface which allows users to search within the data they are interested in by simply entering key words, regardless of the data type. The second is directory searching interface. This interface is specially designed to enable the search only within a kind of data, like group profile or incident. It accepts a wide range of query conditions, such as date, key word and number. Both of the interfaces above are similar to the ones in InterQuest, but benefiting from the “index technique” deployed, their query speed is much faster. The last is listing interface to list all entries of some kind of data. This is a new functionality in which interface does not require any query parameter. Users can browse the entries page by page or jumping to certain listing page while the entries can be sorted in varying ways. The schema adopted here is completely different from the InterQuest, this interface allows users to have entire dataset on the click of a button, sort them out and use the data. It responds very quickly as well.

Viewing all relevant data of a single data type (profiles, incidents etc), provides much convenience to the user. Show/Hide interface is embedded in the new system that allows users to view only the part they are interested without scrolling up or down much to locate it. This is useful for the entries with many data or data which are heavily linked to other entries. This is a significant enhancement from the one in InterQuest, it integrates link view and administration information into one page and avoids redundant blank lines being displayed.

Data manipulation involves two interfaces, data modification and data upload. These two interfaces work almost identically, except that the latter one creates new records. The new feature here is that instead of committing change section by section of a data entry, the new interface saves the change into database field by field, after data is entered or the



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changes effected. Moreover, users can see the change immediately after they commit the data or the changes. (In InterQuest it takes a while to see the changes) By doing so, users do not need to worry about losing their data (new data or modifications) which could happen if data is manipulated section by section as in InterQuest. Moreover, a back-end “confliction avoiding rule” is used to enable different users to modify the same data entry as long as they do not work on the same field of that entry.

The analysis part consists of two functions, entity linking and statistical reporting interface. Prior to actual linking operation, users have to bookmark the data entries they will use. To work more efficiently, the new “entity linking” interface allows multiple links to be created at the same time even if the link types are different. Unlike the list function of InterQuest, this interface is easy to use and quite intuitive. As in the data manipulation interfaces, users can see the result instantly without leaving the page they are at.

The reporting interface is a completely new function. It produces two kinds of statistical reports - table and diagram. Currently the report is incident-oriented while it will be extended to profiles and linked entities. By specifying the period and the filtering conditions (like incident target, tactic etc) and the number of instances to be compared, the reporting interface will generate the statistical information presented both in table and diagram format. To ease the observation on fluctuations, two kinds of diagram are available; curve diagram and histogram. The table can be exported as Excel file format and the diagram can be downloaded as image and thus be directly inserted into the writing. This will immensely help analysts for their monthly incident reports and for presentations.

Another significant improvement in the new system is that, it reads all types of documents – word, pdf, ppt, jpeg, txt, html etc- uploaded into the system. InterQuest was unable to do that. Thus even if documents were uploaded to the system InterQuest was unable to find the document if the search criteria (Keyword) was embedded in the document itself. With the new system, it is possible to find all documents whether the keyword is embedded in the document or entered in the data-entry field

- **Future developments**

In the future, a “map interface” will be developed to visualize recent news and incidents at the corresponding points in a real map, which will mainly be based on Google Map. The system will also be monitored for a while to let it stabilize and fix potential bugs.

Global Pathfinder II has been demonstrated twice to all the analysts. The feedback from the analysts is fairly ok, viz. it is easy to use, intuitive, and faster, compared with InterQuest.



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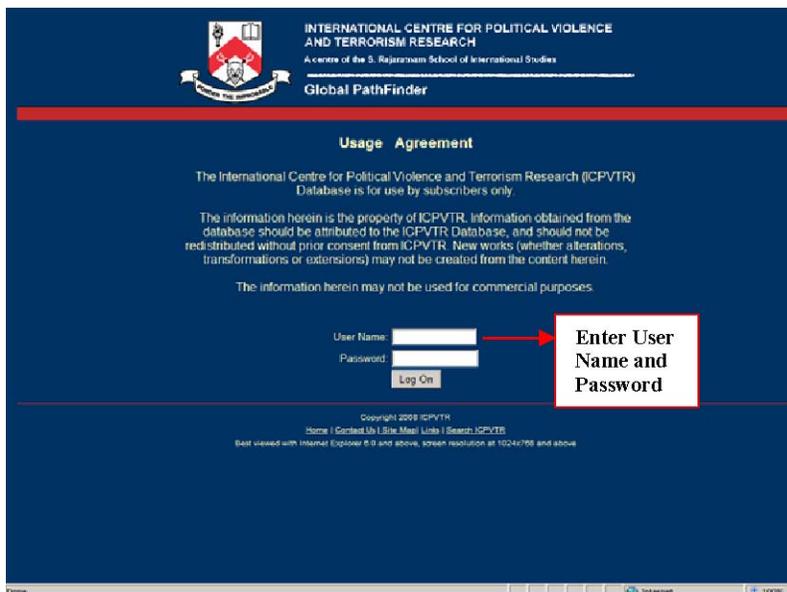
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## 1. Starting Global Pathfinder II



Picture - 1

To log on to Global Pathfinder II, do the following:

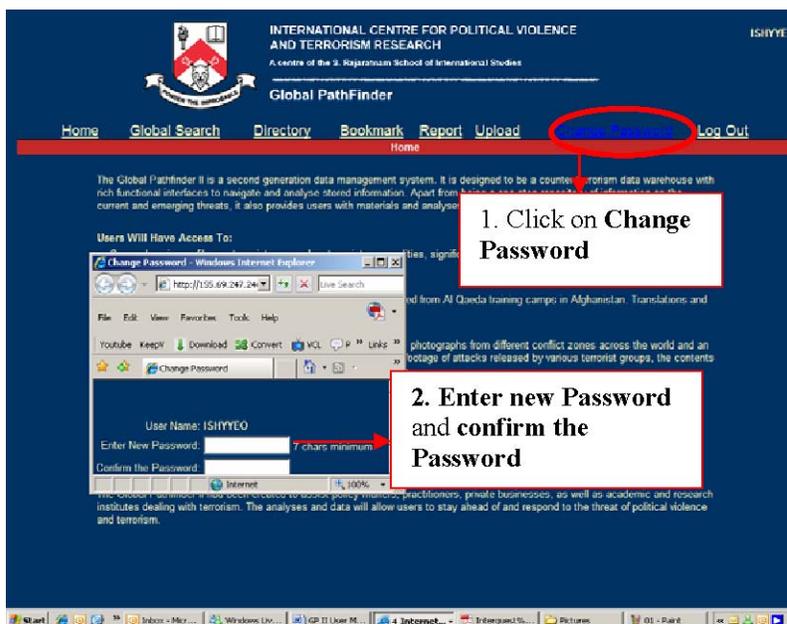
Open the browser and locate the website of the application

(<http://globalpathfinder-rsis.ntu.edu.sg/>).

The Global Pathfinder II log on screen will appear. (Refer Picture - 1)

**Enter User Name** (Not Case Sensitive) and **Password** (Case Sensitive).

## 2. Change Password



Picture - 2

Click on **Change Password**. A pop up will appear and you need to **enter new Password and confirm the Password**. (Refer Picture - 2)



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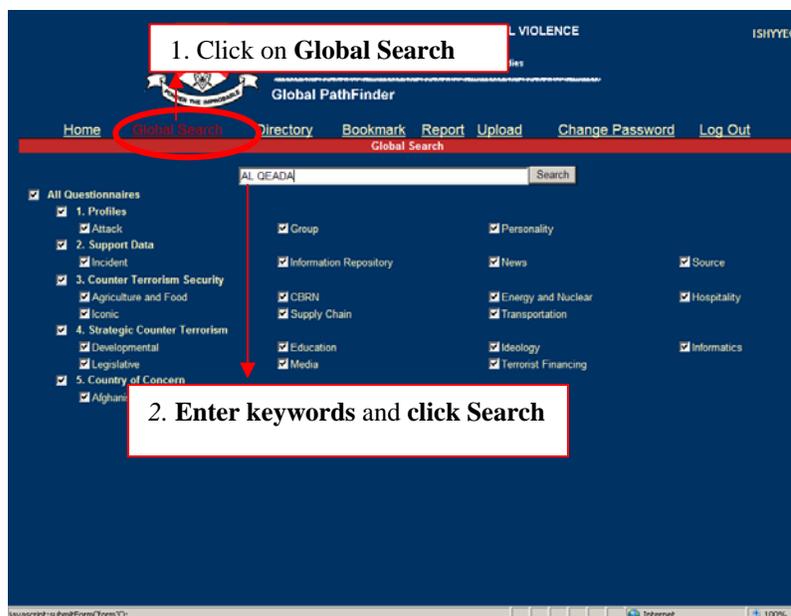
### 3. Search

There are 3 types of searches. Global searches, directory searches and data field searches.

#### 3.1 Global searches

Global searches are the most common uses searches and it can search for all categories in the database.

Global searching is a keyword search similar to searching for documents on the internet. Global searching in Global Pathfinder II allows a user to search across all fields of all questionnaires that the users have access to. Any search results found will meet the exact search criteria entered. Results may differ between users depending on their respective access to data in Global Pathfinder II.



Click on **Global Search**.  
(Remember to check on the checkbox for the category that you are searching for.) **Enter keywords and click Search** (Refer Picture – 3.1.1)

Picture – 3.1.1



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Global Pathfinder

Home Global Search Directory Bookmark Report Upload Change Password Log Out

Attack Results: 1 - 8 of 8 for INDIA (0.0748 seconds)

Serial Blasts in Ahmedabad, Gujarat RSP\_ID: 36061 Relevance: 1.13662

Serial blasts in Assam RSP\_ID: 36057 Relevance: 1.05785

Dantewada Attack RSP\_ID: 18752 Relevance: 0.88474

Serial Blasts in Ahmedabad, Gujarat RSP\_ID: 27186 Relevance: 0.76046

Maosists storm Bihar prison RSP\_ID: 17520 Relevance: 0.69346

October 29 New Delhi Bombings RSP\_ID: 17383 Relevance: 0.51384

1. Click on the View Button

Picture – 3.1.2

When a search is complete the following will appear:  
(Refer Picture – 3.1.2)

Click on  (view button) to view on the full report.

### 3.2 Field-Based Searches

Field based searching is used to search and retrieve response of a single questionnaire where the search criteria are entered into one or more fields of the questionnaire. This search questioner is the same as the profile fields.

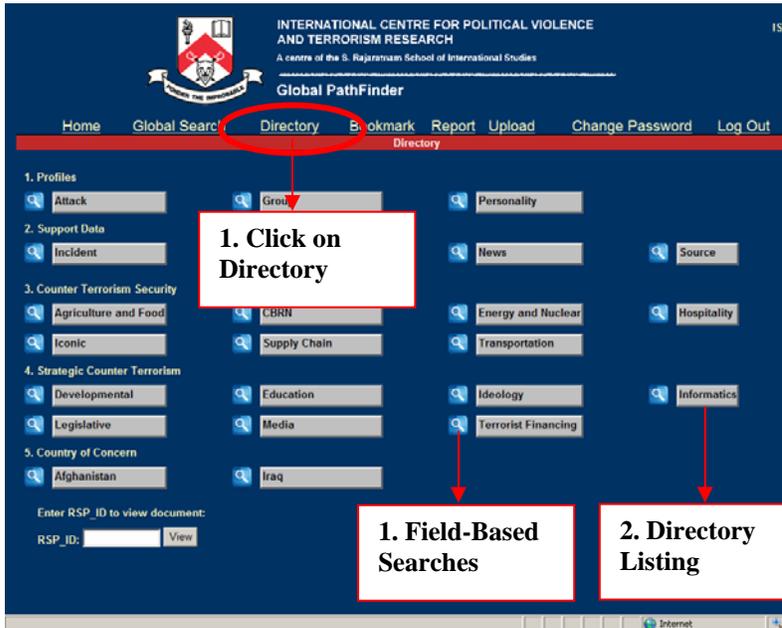
#### How field-based searches work?

If you are searching with more than one field of data or more than one section of the questionnaire, it is important to know how Global Pathfinder II combines your search criteria to find your matching responses. A single piece of search criteria is known as a search term. Different question types can generate different numbers of search terms. Text and each entry of checkbox questions produce single terms, while radio and select lists can produce multiple terms for the one question depending on how many entries you select. When you enter your search criteria and Global Pathfinder II combines all the search terms in specific manner to search the database.



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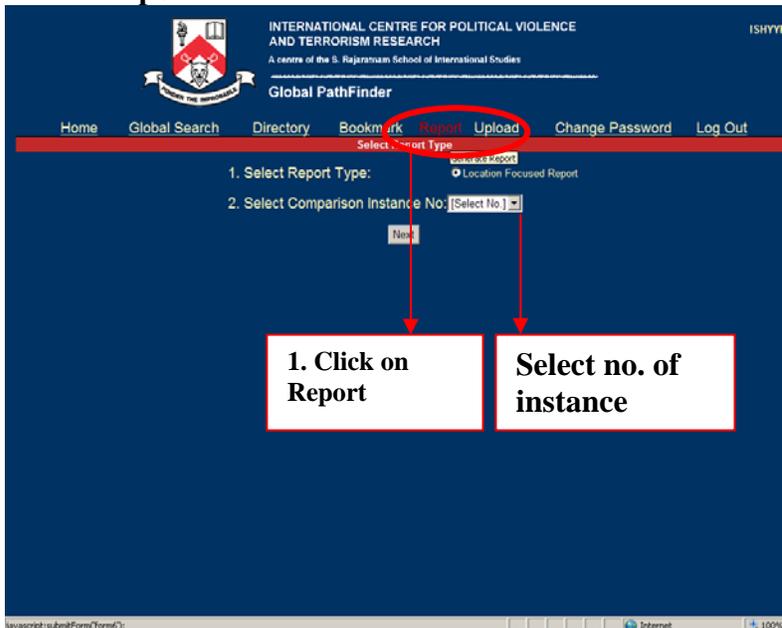
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Click on **Directory**. After that, click on  to conduct field based searches or click on the button for directory listing. (Refer Picture – 3.2)

Picture – 3.2

## 4. Reports



Click on **Report**. After that, select no. of instance and click next. (Refer Picture – 4.1)

Picture – 4.1



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1. \*Select Time Scale:  **Required Field**

2. Select Incident Type:  Counter Terrorist  Terrorist

3. Select Incident Tactic(s):

<input type="checkbox"/> ABDUCTION	<input type="checkbox"/> AMBUSH	<input type="checkbox"/> ARREST	<input type="checkbox"/> ASSASSINATION	<input type="checkbox"/> ASSAULT
<input type="checkbox"/> ATTEMPTED ABDUCTION	<input type="checkbox"/> ATTEMPTED ASSASSINATION	<input type="checkbox"/> ATTEMPTED BOMBING	<input type="checkbox"/> ATTEMPTED SABOTAGE	<input type="checkbox"/> BEHEADING
<input type="checkbox"/> BLOCKADE	<input type="checkbox"/> BOMBING	<input type="checkbox"/> CBRN ATTACK	<input type="checkbox"/> CONVICTION	<input type="checkbox"/> CYBER ATTACK
<input type="checkbox"/> ENCOUNTER	<input type="checkbox"/> EXTORTION	<input type="checkbox"/> FIREFIGHT	<input type="checkbox"/> HUACK	<input type="checkbox"/> HOAX
<input type="checkbox"/> HOSTAGE TAKING	<input type="checkbox"/> INDICTMENT	<input type="checkbox"/> INFILTRATION	<input type="checkbox"/> MASSACRE	<input type="checkbox"/> MURDER
<input type="checkbox"/> RAID	<input type="checkbox"/> RANSOM	<input type="checkbox"/> RAPE	<input type="checkbox"/> RELEASE	<input type="checkbox"/> ROBBERY/HEIST
<input type="checkbox"/> SABOTAGE	<input type="checkbox"/> SEIZURE	<input type="checkbox"/> SENTENCING	<input type="checkbox"/> SHOOTING	<input type="checkbox"/> STABBING
<input type="checkbox"/> SUICIDE ATTACK	<input type="checkbox"/> SURRENDER	<input type="checkbox"/> THREATS	<input type="checkbox"/> VANDALISM	

4. Select Incident Weapon Used:

<input type="checkbox"/> ARSON	<input type="checkbox"/> BIOLOGICAL	<input type="checkbox"/> BOMBS	<input type="checkbox"/> CHEMICAL	<input type="checkbox"/> CYBER VIRUS
<input type="checkbox"/> MORTARS/ROCKETS	<input type="checkbox"/> SHARP/BLUNT WEAPONS	<input type="checkbox"/> SMALL ARMS		

5. Select Incident Target(s):

<input type="checkbox"/> DOMESTIC - Business	<input type="checkbox"/> DOMESTIC - Ethnic/racial	<input type="checkbox"/> DOMESTIC - Infrastructure	<input type="checkbox"/> DOMESTIC - Organizations	<input type="checkbox"/> DOMESTIC - Public
<input type="checkbox"/> DOMESTIC - Religious	<input type="checkbox"/> DOMESTIC - Security	<input type="checkbox"/> EX - TERRORIST	<input type="checkbox"/> FOREIGN - Business	<input type="checkbox"/> FOREIGN - Ethnic/racial
<input type="checkbox"/> FOREIGN - Infrastructure	<input type="checkbox"/> FOREIGN - Organizations	<input type="checkbox"/> FOREIGN - Public	<input type="checkbox"/> FOREIGN - Religious	<input type="checkbox"/> FOREIGN - Security
<input type="checkbox"/> TERRORIST ORG				

6. Select Period From:

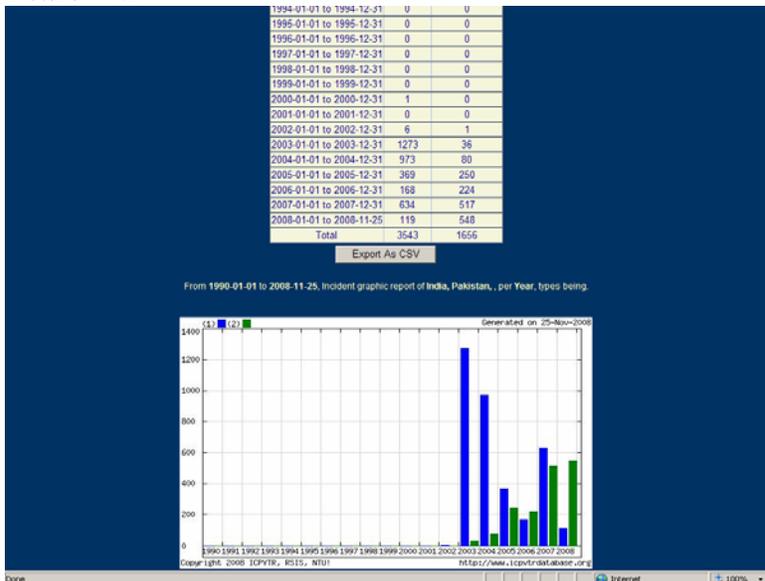
7. Select Period To:

8. \*Select Diagram Format:  **Required Field**

9. \*Select Country(s):   **Required Field**

\* are required fields. The rest are optional fields. Please select the time scale, diagram format and the country. After that click **Generate Report**. (Refer Picture – 4.2)

Picture – 4.2



Result of the Reports.

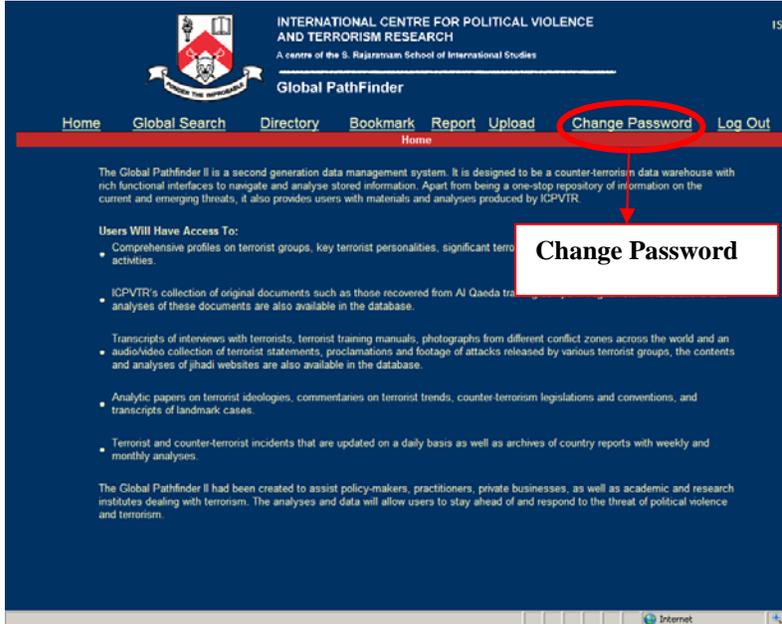
Picture – 4.3



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## 5. Logout



The logout function enables the user to quit or logout of the system. (Refer Picture – 5)

Picture – 5



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## Frequent ask Questions

### 1. How to find out when a particular search result – group profile or incident was last updated?

#### Answer:

At the bottom of each screen, there is a line that provides the response number, date created, modification date, modification details etc:

#### Response Status

**Response ID :** 4502  
**Group Name :** General Data  
**Status Name :** AVAILABLE  
**Created By :** ADMINISTRATOR  
**Date Created :** 2005-02-03  
**Modified By :** ISGAYEDELLE  
**Date Modified :** 2008-11-21

#### External Reference :

*In full view mode these details can be seen at the bottom of the document: (Refer to Picture 1)*

The screenshot shows a list of search results with columns for link ID, type, and title. Below the list are sections for 'Referenced In', 'Member Is', and 'Operates In'. At the bottom, the 'Response Status' section is circled in red, and a red arrow points from it to a box labeled 'Last updated'.

Link ID	Type	Title
(199) Link ID:9285	[News]	MILF wants ceasefire body to quiz suspects 2004-10-23 2004-10-23
(200) Link ID:9284	[News]	Brunei soldiers arrive to monitor ceasefire pact with MILF 2004-10-21 2004-10-21
(201) Link ID:9283	[News]	Autonomy not answer, say Moro rebs 2004-10-13 2004-10-13
(202) Link ID:9282	[News]	Manila, rebels postpone inspection of suspect base 2004-09-23 2004-09-23
(203) Link ID:9281	[News]	Gov't-MILF talks to resume October 2004-09-30 2004-09-30
(204) Link ID:9280	[News]	MILF denies terror ties in meeting with OIC envoys 2004-09-26 2004-09-26
(205) Link ID:9279	[News]	Military pulls out from MILF stronghold 2004-09-25 2004-09-25
(206) Link ID:9278	[News]	Foreign aid to MILF lessens after 9/11 2004-10-28 2004-10-28
(207) Link ID:9277	[News]	Arroyo adviser sees no obstacle to pact with MILF 2004-12-01 2004-12-01
(208) Link ID:9276	[News]	13 bodies of MILF rebels recovered in Maguindanao 2005-01-11 2005-01-01
(209) Link ID:9275	[News]	Referendum on peace pact urged 2004-12-29 2004-12-29

**6. Referenced In (6 link(s))**

Link ID	Type	Title
(1) Link ID:10899	[Source]	WOMEN in MILF
(2) Link ID:10898	[Source]	M I L F PERSONALITIES pics
(3) Link ID:10897	[Source]	MILF MILITARY CAPABILITY.doc
(4) Link ID:10896	[Source]	BIAF Bangsamoro Islamic Armed Forces
(5) Link ID:10894	[Source]	The MILF on alleged links with al Qaeda-Jemaah Islamiyah.mht
(6) Link ID:10893	[Source]	AFP LOSSES, PICS by MILF

**7. Member Is (3 link(s))**

Link ID	Type	Title
(1) Link ID:10855	[Personality]	Salamat Hashim
(2) Link ID:10854	[Personality]	Al Haj Murad Ahod
(3) Link ID:10853	[Personality]	Hadji Mukhlis Umpara

**8. Operates In (1 link(s))**

Link ID	Type	Title
(1) Link ID:33	[]	68

**Response Status**

response ID : 4502  
Group Name : General Data  
Status Name : AVAILABLE  
Created By : ADMINISTRATOR  
Date Created : 2005-02-03  
Modified By : ISGAYEDELLE  
Date Modified : 2008-11-21  
External Reference :

Picture - 1



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2. In information Repository, I find that only the summary/descriptions of the document are given. There is no document to view.

### Answer:

Some documents are created for specific purposes and for specific clients. These documents can be obtained on request. (Refer to Picture 2)

Support Data (Information Repository): [13749]The Terrorist Threat to Business in Indonesia Add to Bookmark

1. General	
Title:	The Terrorist Threat to Business in Indonesia
Group:	Jl, Lj, GAM, WI
Country:	1) Indonesia
General Classification:	Documents;
Subject Classification:	Islam;Attacks;Ideology;
Summary:	An assessment of the terrorist threat to business in Indonesia. Maps out the current threat from Jl, role of Salafism in spreading the radical ideology and role of Pesantrens. Focus on Kalimantan
Document:	
Document Availability:	Requires Request;

**Document upon request**

### Links

[Information Repository] RSP\_ID: 13749 The Terrorist Threat to Business in Indonesia

### Response Status

Response ID : 13749  
Group Name : General Data  
Status Name : AVAILABLE  
Created By : ISARABINDA  
Date Created : 2005-05-27  
Modified By : ISCPCHUA  
Date Modified : 2005-06-22  
External Reference :

Picture – 2



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### 3. How do I get all the incidents of a particular country, for example Indonesia?

**Answer:**

*Step by step solution*

1. Select Directory
2. Search Incident
3. Enter Indonesia in the Country(s) field (*Refer to Picture 3*)
4. Click Search

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Global PathFinder

Home Global Search Directory Bookmark Report Upload Change Password Log Out

Incident Field based Search

1). Incident Details

1. Title

2. Type

Counter Terrorist  Terrorist

3. Date From

4. Date To

5. Country(s)

6. Narrative(s)

7. Tactic(s)

8. Weapon Used

Click Search

Search

Enter Indonesia

Picture – 3



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### 4. How do I open a document in Information Repository

#### Answer:

The achieved document can be found in document file. Click on the link to retrieve (*Refer to Picture 4*). A screen will prompt you to open or save the document.

Support Data (Information Repository): [36218]AFGHANISTAN MONTHLY REPORT-OCT 2008

Add to Bookmark

1. General	
Title:	AFGHANISTAN MONTHLY REPORT-OCT 2008
Group:	AFGHANISTAN
Country:	
General Classification:	Articles;
Subject Classification:	
Summary:	
Document:	1) Thumbnail: 
	Filename: <a href="#">CAF's Monthly Report October 2008.pdf</a>
	Description:
Document Availability:	

**Click on the link**

#### Links

[Information Repository] RSP\_ID: 36218 AFGHANISTAN MONTHLY REPORT-OCT 2008

#### Response Status

Response ID : 36218  
Group Name : General Data  
Status Name : AVAILABLE  
Created By : ISVINAY  
Date Created : 2008-11-17  
Modified By : ISVINAY  
Date Modified : 2008-11-17  
External Reference :

Picture – 4



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### **5. How is News different from Incidents:**

#### **Answer:**

Terrorism incidents cover acts by terrorist (bombing, shooting) which are classified as terrorist incidents or actions taken by law enforcement, police or military officials against the terrorists (arrests, killing in encounters, surrenders, etc) classified as counter-terrorism incidents. Other news item which do not fall into any of these categories but have relevance for the terrorist group (change of leadership, statement from a group etc) are classified as News in the database.