

**$\pi$  People's Intelligence (PI)**  
Networked Reporting and Verification by the People



## Documentation of the **PI** Demo



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## How to use the PI Demo

### A. Main interface

The main interface of the PI demo is divided in 2 main areas:

1. Conversation area in **red**
2. Reports area in **blue**

The screenshot shows the PI demo interface. On the left, a red-bordered area contains a mobile phone interface with a 'phone number' input field and a 'Send' button. On the right, a blue-bordered area contains a world map with colored markers and a table of reports. The table has columns for Incident time, Incident location, Incident description, Number of victims, Session id, Categories, and Reporting time. Below the map and table, there is a text input field with the prompt '> Start a report session with PI by sending a message'.

### B. Reporting an incident

From the perspective of an **untrained person** who wishes to report an incident:

1. Enter a phone number
2. Enter a message in the screen of the mobile phone and press Send



3. PI will start a conversation composed of a number of questions. Answer each question to the best of your knowledge, trying to follow the proposed format. If PI does not understand your answer, you will be prompted with follow up questions. Once PI can process your answer, you will automatically be presented with the next question until you answered all the questions.



In case PI does not understand your answer, for example you did not follow the proposed date format or you gave a location PI cannot find you will be prompted with follow up question.

In the case of a date, PI will simply repeat the question until it understands your answer.



If it does not find the location you provided, it will ask you to provide another location that is near the location where you reported the incident happened.

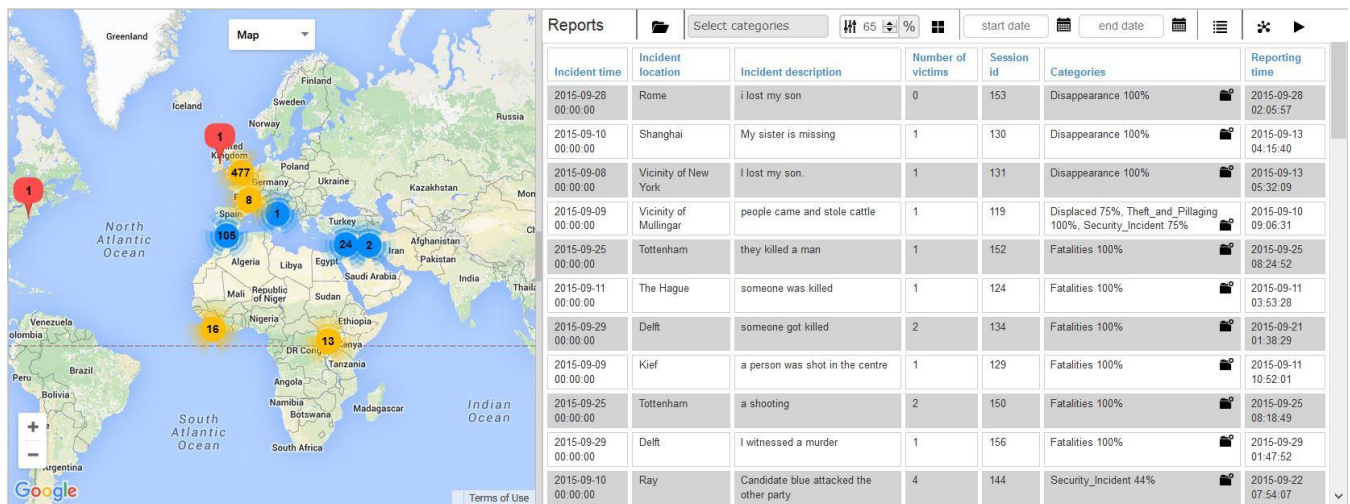


For the purpose of the demo it is possible to follow the conversation between you and PI at the bottom of the screen.

```
> Question 4: How many victims are there? Please reply with a number.  
A car was stolen  
> Question 3: Can you tell us very briefly what happened?  
5 days ago  
> Question 2: When did the incident take place? Reply 'today', 'yesterday', '2  
days ago' or provide a date and time along the format 'dd-mm-yyyy hh:mm' (e.g.  
22-5-2015 18:30)  
Enghien  
> We will ask you 4 questions. Question 1: Where did the incident occurred?  
Reply with name of the village/city.  
yes  
> You are connected to PI. Information sent over this channel is not secured.  
Reply 'yes' if you want to continue or hang up.  
help
```

From the perspective of an **end-user**, typically a staff member of an organization running PI, the demo provides the following functionalities:

## C. Visualising reports

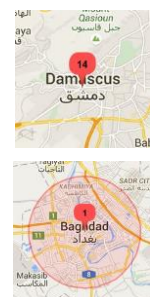


The map shows the number of victims reported by location. Blue and yellow icons represent two different levels of report aggregation. Once zooming in, the individual reports making up the aggregates will be shown.

It is also possible to click on one of the icon and the relevant report(s) will be shown in the adjacent table. By design, the table adjacent to the map will dynamically adapt the number of reports shown to the level of zoom applied to the map. The selection of an area on the map is also possible via the following icons:

### Precise locations versus not so precise locations:

When PI finds the reported location of an incident, it will represent it with a precise location pointer:



When PI cannot find the reported location and another location in the vicinity of the reported incident is provided, PI will represent the location in which vicinity the incident reportedly occurred with a halo of approx. 5 km radius as to differentiate it from reports for which a precise location is known:

### Showing all reports:

After zooming in or out, or selecting a particular report, it is always possible to reset the map to show all reports. First click on “Manage categories” and then “Show all reports”

## D. Sorting reports

### By categories:

Using the  multiple select drop down, it is possible to select which categories of reports to display on the map and in the table. The map and the table will be automatically refreshed to only shows those reports which belong to the selected categories.

In the table it is possible to view reports by category . Since one report can belong to more than one category, it may appear under several headings. Users can define the level of confidence that a report will be shown as clustered within a certain category by adjusting.

Reports						
<input type="text" value="Select categories"/>						
Category: Fatalities						
Incident time	Incident location	Incident description	Number of victims	Session id	Categories	Reporting time
2015-10-22 00:00:00	Vicinity of Quenast	A person was killed	0	200	Fatalities 100%	2015-10-27 13:06:53
Category: Security incident						
Incident time	Incident location	Incident description	Number of victims	Session id	Categories	Reporting time
2015-10-22 00:00:00	Vicinity of Tubize	A bomb exploded in a school	26	203	Fatalities 37%, Security_Incident 100%	2015-10-27 13:15:21
Category: Sexual and gender violence						
Incident time	Incident location	Incident description	Number of victims	Session id	Categories	Reporting time
Category: Theft and pillaging						
Incident time	Incident location	Incident description	Number of victims	Session id	Categories	Reporting time
2015-10-18 00:00:00	Menet	a thief entered my neighbour's house	2	163	Theft_and_Pillaging 100%, Humanitarian 100%	2015-10-23 00:19:00
Category: Abduction						

To return to all reports, click on “Show all reports”

### Within a certain timeframe

Using the fields   it is possible to filter reports by date. The map and the table will be automatically refreshed to only shows those reports which fall within the given timeframe.

## Ascending and descending

In the table, it is possible to sort reports by incident time, location, description, number of victims, categories and reporting time in either an ascending or a descending order by simply clicking on the column name. In this example, the incident location has been sorted in ascending order.

Incident time	Incident location	Incident description	Number of victims
2015-09-24 00:00:00	Baghdad	3 people came and stole my cow	1
2015-09-24 00:00:00	Vicinity of Baghdad	they stole my neighbour's cow	1
2015-09-10 00:00:00	Vicinity of Buchanan	supporters of candidate Blue attacked supporters of candidate Grey	7
2015-10-25 00:00:00	Bunia	Army established a roadblock	0

## E. Managing automatic clustering

The PI Demo automatically clusters reports along predefined thematic categories. The level of confidence that a reports belongs to a certain category is shown in % next to each category.

2015-10-24 00:00:00	Goma	rebels attacked nearby village	3	170	Theft_and_Pillaging 22%, Security_Incident 100%, Fatalities 20%
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The clustering operates along a list of keywords which are illustrative of a specific category. User can add or delete keywords for each category, thereby enhancing or reducing the PI Demo capacity to cluster a report within one or more categories.

Reports
 11 selected
75 %
start date
end date

Security incident +

Sexual and gender violence +

Theft and pillaging +

theft

steal

stole

thief

rob

robbing

pillage

pillaging

loot

looting

take

taken

intrusion

break in


burglary

Users can add new keywords by clicking on the plus sign next to the category title. Users can choose to delete keywords from the list by clicking on . At this stage it is not yet possible to add or remove existing categories.



## F. Triangulating reports

The PI Demo allows users to triangulate reports along a number of criteria: a **same incident date**, a **proximate location** and at least **one thematic category** in common within a given level of confidence.

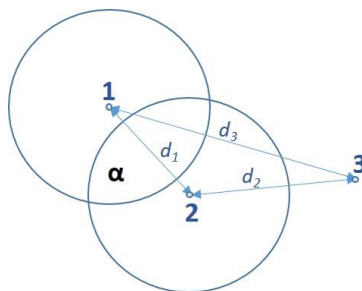
Click on the icon “Start triangulation” . Since the PI demo allows for approximate locations, the user must to define the maximum distance ( $d_1$ ,  $d_2$ ,  $d_3$ ) between incident locations (1, 2, 3) as well as the proportion of intersecting areas ( $\alpha$ ) between approximate reports.


### Clustering settings

Distance:

Intersection area:  %

Start



The results can be visualized by triangulation results by clicking on the “Show triangulation reports” .

Satellite

Reports

Select categories

65 %

start date

end date

Show triangulation reports

Triangulated reports

Reports id	Victims
156,134	1,2

Incident time	Incident location	Incident description	Number of victims	Session id	Categories	Reporting time
2015-09-29 00:00:00	Delft	I witnessed a murder	1	156	Fatalities 100%	2015-09-29 01:47:52
2015-09-29 00:00:00	Delft	someone got killed	2	134	Fatalities 100%	2015-09-21 01:38:29

Reports id	Victims
145,147	14,10

Incident time	Incident location	Incident description	Number of victims	Session id	Categories	Reporting time
2015-09-20 00:00:00	Damascus	indiscriminate shelling on a school	14	145	Security_Incident 100%, Fatalities 100%	2015-09-25 03:38:44
2015-09-20 00:00:00	Damascus	bombing on a school	10	147	Security_Incident 100%, Fatalities 75%	2015-09-25 03:43:29

Reports id	Victims
148,149	1,1

Incident time	Incident location	Incident description	Number of victims	Session id	Categories	Reporting time
2015-09-24 00:00:00	Baghdad	3 people came and stole my cow	1	148	Theft_and_Pillaging 100%	2015-09-25 05:19:12