IMSR-TOOL-1.05 USER MANUAL

Description

IMSR-TOOL is a free and open-source Java application to help extract structured information from the United States Incident Management Situation Reports (IMSRs).

IMSRs are PDFs, publicly available for download from the historical IMSR Data Archive at www.predictiveservices.nifc.gov/intelligence/archive.htm.

IMSR-TOOL does not support extracting IMSRs of years prior to 2007.

Developer

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Website

For the latest updates and information of how to cite this tool, please visit

https://github.com/thumit/IMSRtool

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Please contact the author for additional information.

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1. Software Requirement

IMSR-TOOL is released as a 64-bit portable desktop application. The latest version IMSR-TOOL-1.05 requires following conditions to run:

- Hardware: a 64-bit computer
- Software: Java JDK 15 or later versions. The Java JDK 15 can be downloaded at https://www.oracle.com/java/technologies/javase-jdk15-downloads.html. If you need to run IMSR-TOOL using an older version of Java JDK, please contact the tool's developer.
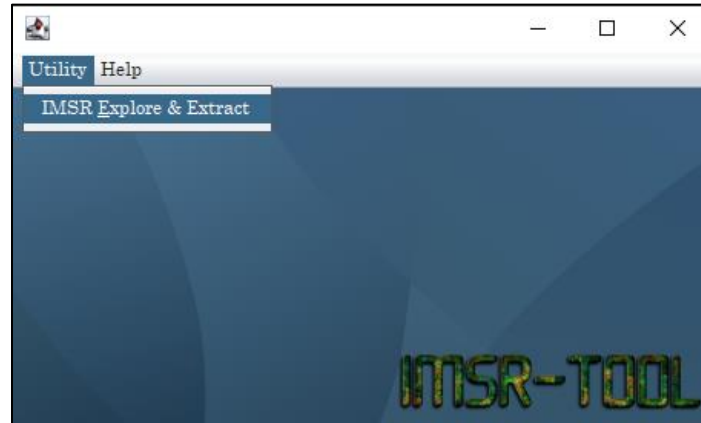
IMSR-TOOL requires no further set up to run. Users can start using it by launching the ***IMSR-TOOL-1.05-JDK15.jar*** file.
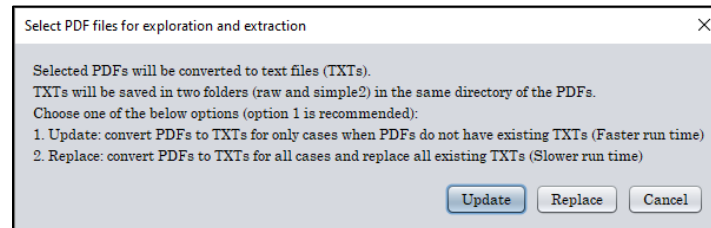
2. Software Functionality

Data Preparation

Users need to have a set of IMSR PDF files (see first page for the IMSR download link). Each PDF must be named exactly as *YYYYMMDDIMSR.pdf* where *YYYYMMDD* is the report date of the IMSR. For example, *20200110IMSR.pdf* refers to the IMSR reported on Jan 10th, 2020. It is likely not necessary to rename the PDFs downloaded from the IMSR Archive because they already had the correct naming format.
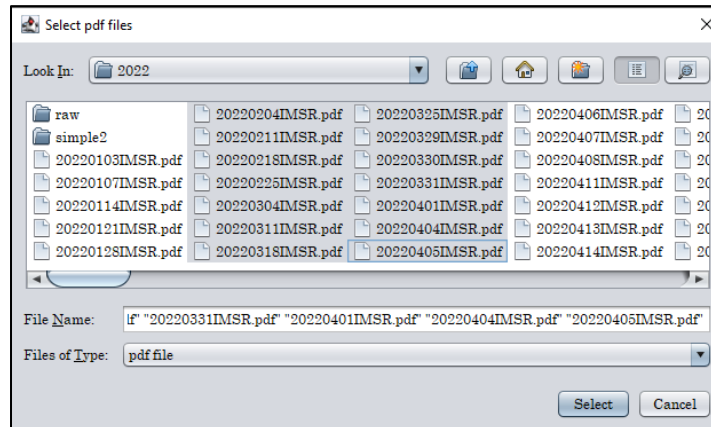
Step 1. Launch *IMSR-TOOL-1.05-JDK15.jar*, then click on *Utility*, *IMSR Explore & Extract*.
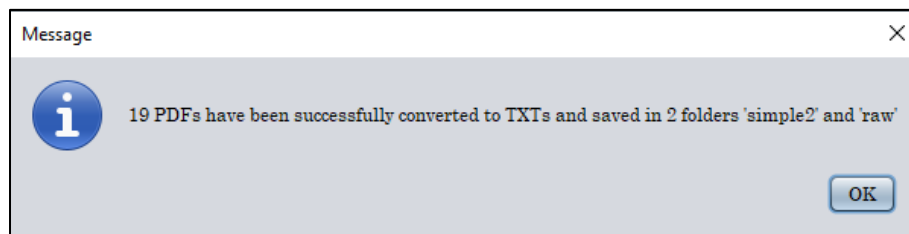

Step 2. Click on one of the two available options (*Update* or *Replace*) to process IMSR PDFs.
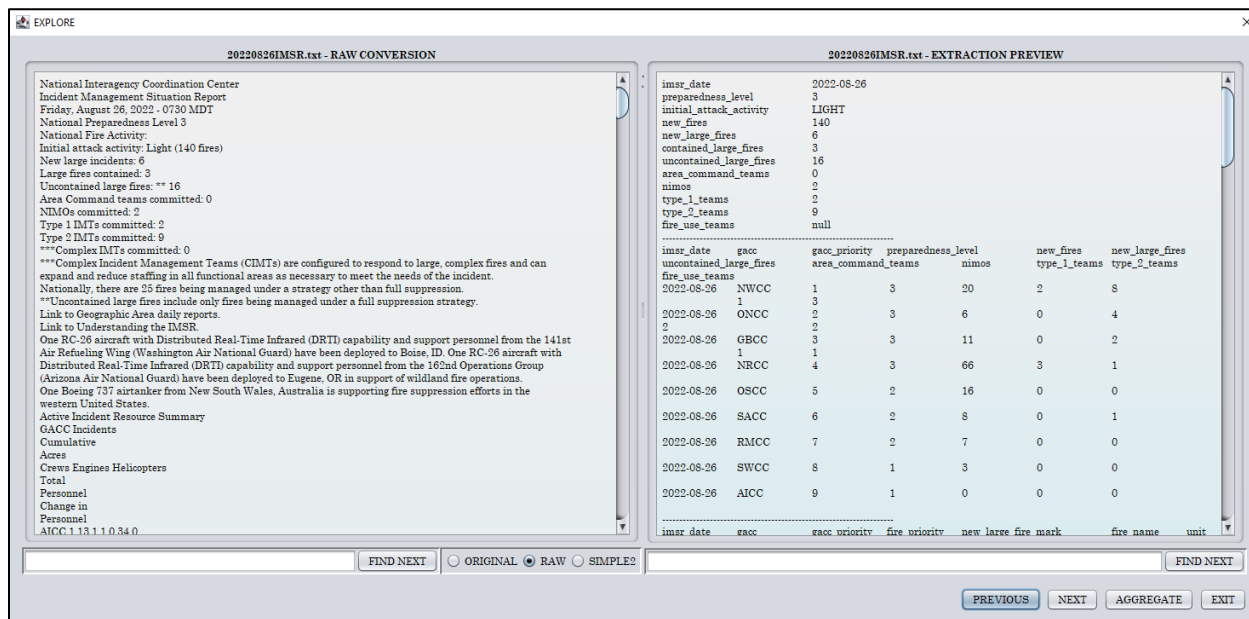

Step 3. Highlight single or multiple PDFs, then click on *Select*.

It may take several minutes for the tool to convert PDFs to TXTs. Please wait until the next window shows up. The below window only pops up when IMSR-TOOL needs to convert some PDFs to TXTs. Otherwise (if conversion is not necessary since all selected PDFs already had their associated TXTs), the window will not show up.

Step 4. After Step 3, a window will show up and allow users to preview the extracted data from each IMSR PDF.

The left screen shows the text converted from the PDF and saved to the TXT file. It has several functions for exploring the data:

1. *FIND NEXT*. Users can type a phrase and use this function to search for this phrase in the TXT.
2. *ORIGINAL*. This function directly opens the PDF.
3. *RAW*. This function shows the TXT converted from the PDF based on "Raw Method".
4. *SIMPLE2*. This function shows the TXT converted from the PDF based on "Simple2 Method".

Note that IMSR-TOOL uses both conversion methods so that it can extract the data by two different ways and perform a pairwise validation to ensure the accuracy of the final dataset.

The right screen shows the data extracted by the tool. It also allows exploring the extracted data by the *FIND NEXT* function.

Under the right screen, there are several functions to help explore different IMSRs and their corresponding extracted data:

1. *PREVIOUS*. Show the previous IMSR.
2. *NEXT*. Show the next IMSR.
3. *AGRREGATE*. Aggregate extraction results for all of the user-selected PDFs. This may take several minutes. Please wait until the next window shows up.
4. *EXIT*. Stop all processes and close all windows.

Step 5. After clicking on *AGRREGATE* function, the below window will show up. It has several functions to help explore the extraction results:

1. *NATIONAL ACTIVITY*. Show the national fire activity across all IMSRs.
2. *REGIONAL ACTIVITY*. Show the regional fire activity across all IMSRs.
3. *WILDFIRE ACTIVITY*. Show the specific fire activity across all IMSRs.
4. *RESOURCE SUMMARY*. Show the summary of fire suppression resource use for all fires.
5. *CONSOLE*. Show the progress of data extraction and notes on the final extraction results.

AGGREGATION RESULTS

imsr_date	area_command_teams	preparedness_level	nimos	initial_attack_activity	type_1_teams	type_2_teams	fire_use_teams	new_fires	new_large_fires	contained_large_fires		uncontained_large_fires
2022-08-26	3	LIGHT		140	6	3		16	0	2	2	9
2022-08-27	3	LIGHT		109	3	0		17	0	2	2	10
2022-08-28	3	LIGHT		72	1	1		17	0	1	3	10
2022-08-29	3	LIGHT		84	0	0		17	0	1	2	10
2022-08-30	3	LIGHT		66	1	3		14	0	1	3	9
2022-08-31	3	LIGHT		85	1	0		14	0	1	3	9
2022-09-01	3	LIGHT		88	6	0		18	0	1	2	9
2022-09-02	3	LIGHT		112	15	0		19	0	1	3	8
2022-09-03	3	LIGHT		98	7	1		23	0	1	4	10
2022-09-04	3	LIGHT		77	5	1		23	0	1	4	13
2022-09-05	3	LIGHT		100	3	3		21	0	0	4	14
2022-09-06	4	LIGHT		91	4	1		21	0	0	4	14
2022-09-07	4	LIGHT		108	6	5		22	0	0	6	15
2022-09-08	4	LIGHT		111	11	1		26	0	1	8	14
2022-09-09	4	LIGHT		131	25	5		35	0	1	10	16
2022-09-10	4	LIGHT		75	6	7		32	0	1	9	17
2022-09-11	4	LIGHT		66	4	4		31	0	1	10	16
2022-09-12	4	LIGHT		54	2	3		29	0	1	10	14
2022-09-13	4	LIGHT		39	2	2		28	0	1	11	14
2022-09-14	4	LIGHT		85	1	6		27	0	1	12	13
2022-09-15	4	LIGHT		97	3	1		29	0	1	11	13
2022-09-16	3	LIGHT		64	7	3		27	0	1	10	11
2022-09-17	3	LIGHT		60	1	1		26	0	1	10	10
2022-09-18	3	LIGHT		41	1	3		23	0	1	6	9
2022-09-19	3	LIGHT		71	2	0		24	0	1	6	8
2022-09-20	3	LIGHT		136	0	2		22	0	0	6	7
2022-09-21	3	LIGHT		55	5	2		24	0	0	7	8

◉ NATIONAL ACTIVITY ○ GACC ACTIVITY ○ WILDFIRE ACTIVITY ○ RESOURCE SUMMARY ○ CONSOLE | FIND NEXT |

Note: **Do not close this window immediately** because you may want to export the extraction results before closing it. IMSR-TOOL does not have any function to export the results. However, this can be done easily by highlighting the texts you want in each screen (or all text via *CTRL+A* shortcut of the Window OS), then copy the highlighted texts (via *CTRL+C*), and paste into external software such as MS Word or MS Excel for your further analyses.