

BMLC2GUI User Guide

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BMLC2GUI User Guide

Introduction:

The main Purpose of the BMLC2GUI is to provide an easy-to-use and open-source graphical user interface to BML users. It is an application developed in Java that generates a Swing interface using two marvelous tools:

1. Xcentric JAXFront : which generates a GUI interface at run-time for any XML document using its schema
WebSite <http://www.jaxfront.org>
2. BBN OpenMap : which is used to generate geospatial graphical interface for the data in the XML document on the map
WebSite <http://www.openmap.org/>

Major Functionality:

1. Pulling Reports:

The most important functionality of the BMLC2GUI is to pull reports from the SBMLServer. This can be done through two ways:

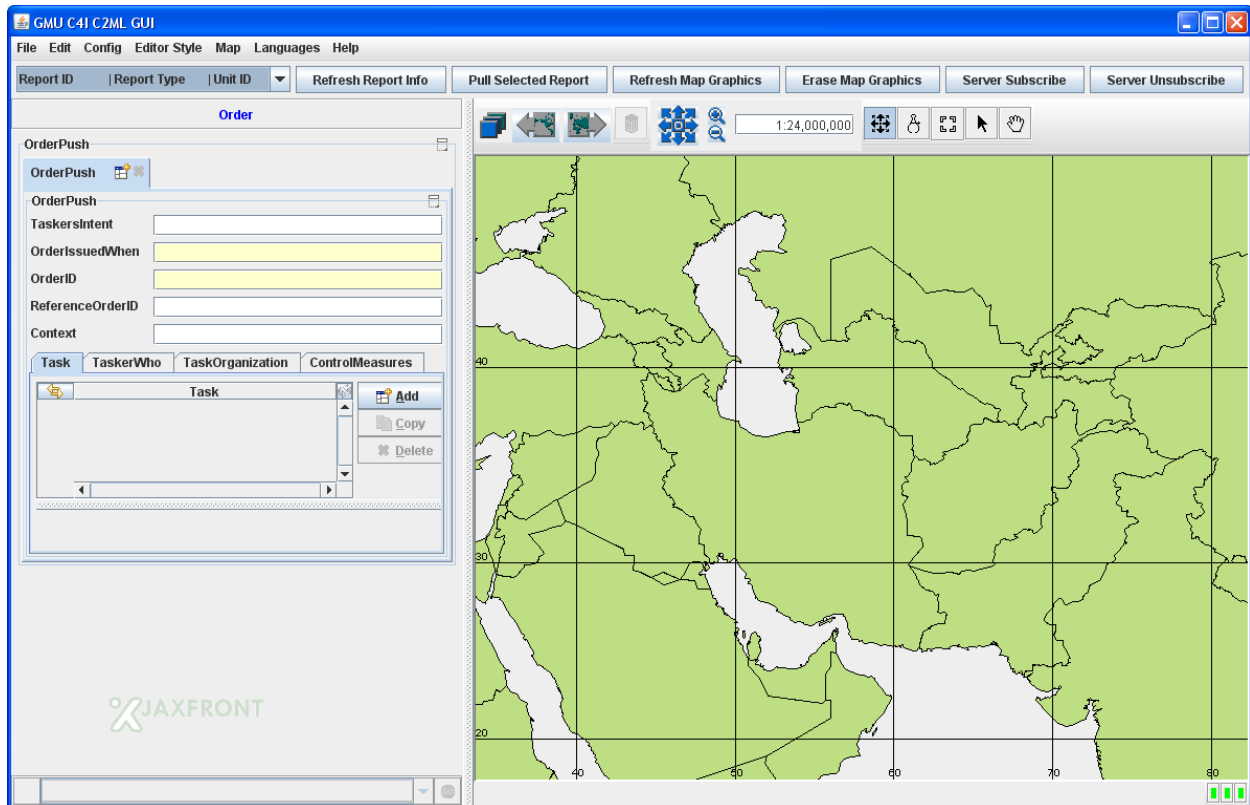
- a. By activating the SBMLSubscriber listener application, which listens to any coming new report and automatically detects its type and displays it in the editor area. It will also extract any geospatial data in the report and display it on the map.
- b. By selecting the desired report from a Report Information list of the latest reports added from the web service. The report info includes: report ID, report Type and Object ID. The user can get the latest reports by pressing the “Refresh Report Info” and after selecting the report he can click “Pull Selected Report” to open it.

2. Editing and Pushing Orders:

The BMLC2GUI provides the capability to create and edit Orders. After editing, and maybe validation, the report can be pushed through the web service.

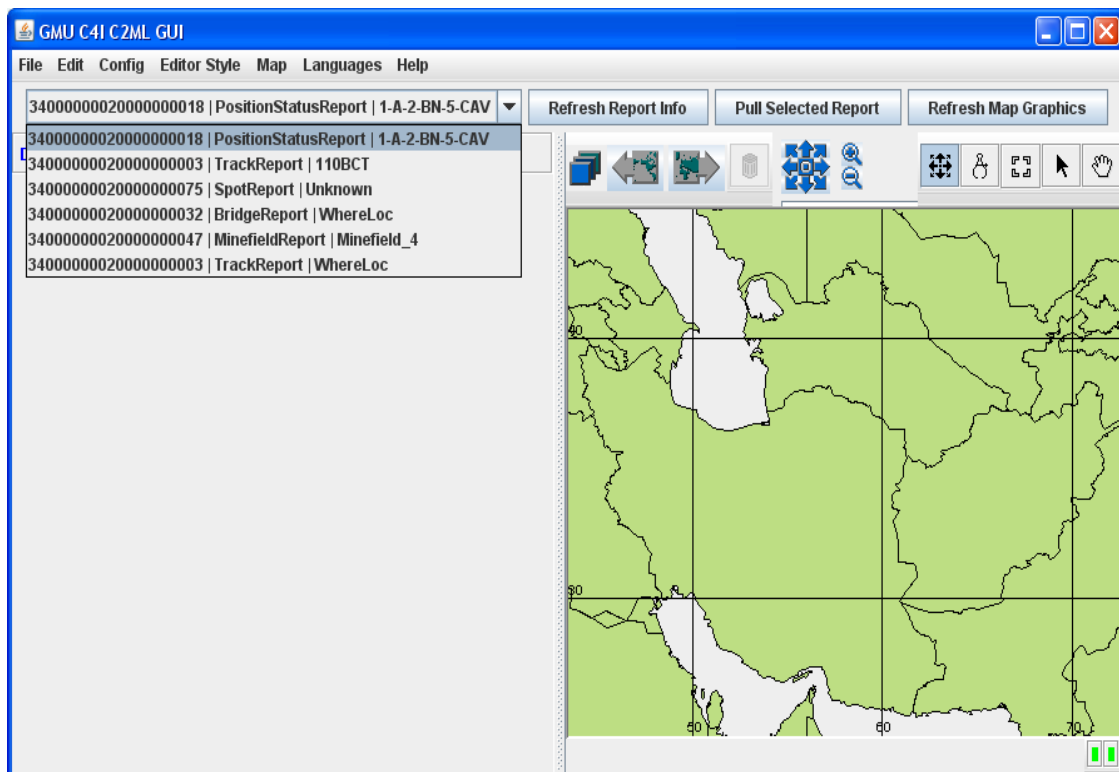
BMLC2GUI Details:

- **Tool Bar:**



1. Report Info List :

The report info includes: report ID, report Type and Object ID. The user can get the latest reports by pressing the “Refresh Report Info” and after selecting the report can click “Pull Selected Report” to open it.

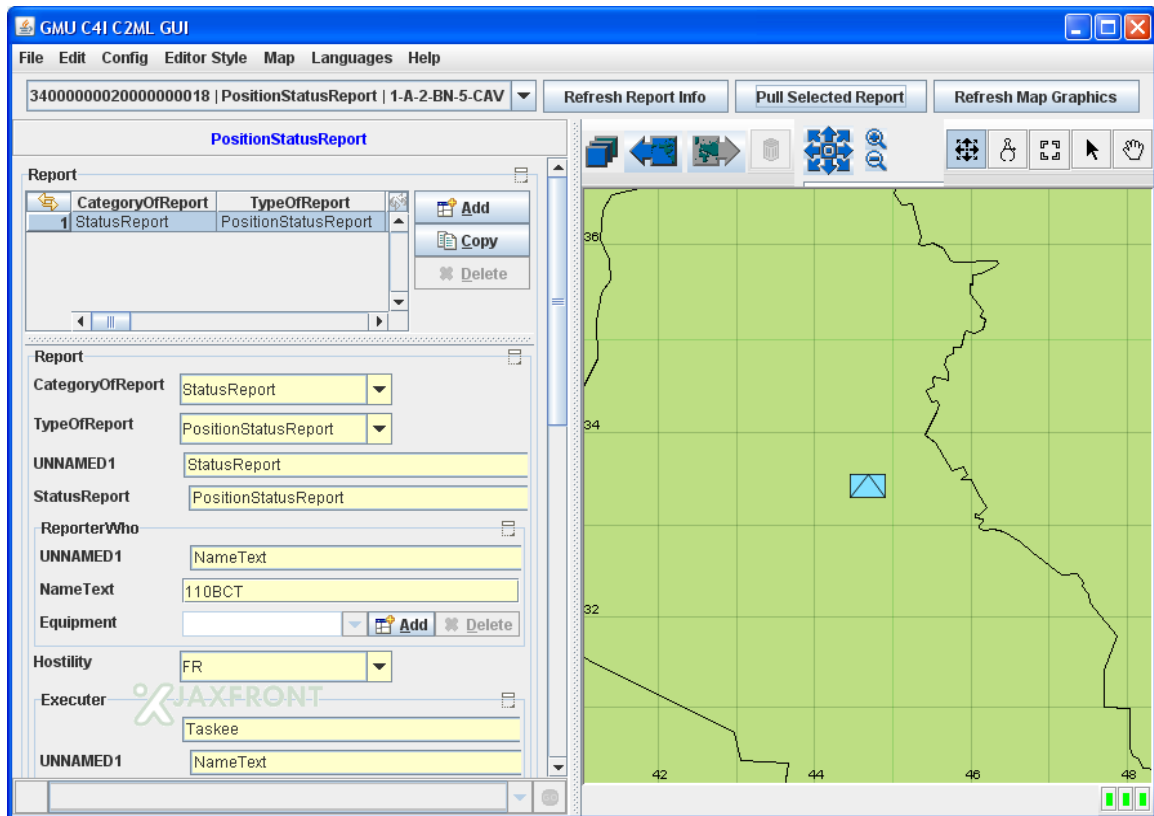


2. Refresh Report Info

The user can get the latest reports by pressing the “Refresh Report Info”

3. Pull Selected Report

After selecting the report can click “Pull Selected Report” to open it.



4. Refresh Map Graphics

At any time, the user can redraw the current geospatial information from the currently displayed document

5. Erase Map Graphics

The user can erase all graphical objects from the map.

6. Server Subscribe

Subscribe to the SBMLServer so that the user can get reports immediately (Online) and display them in the editor area

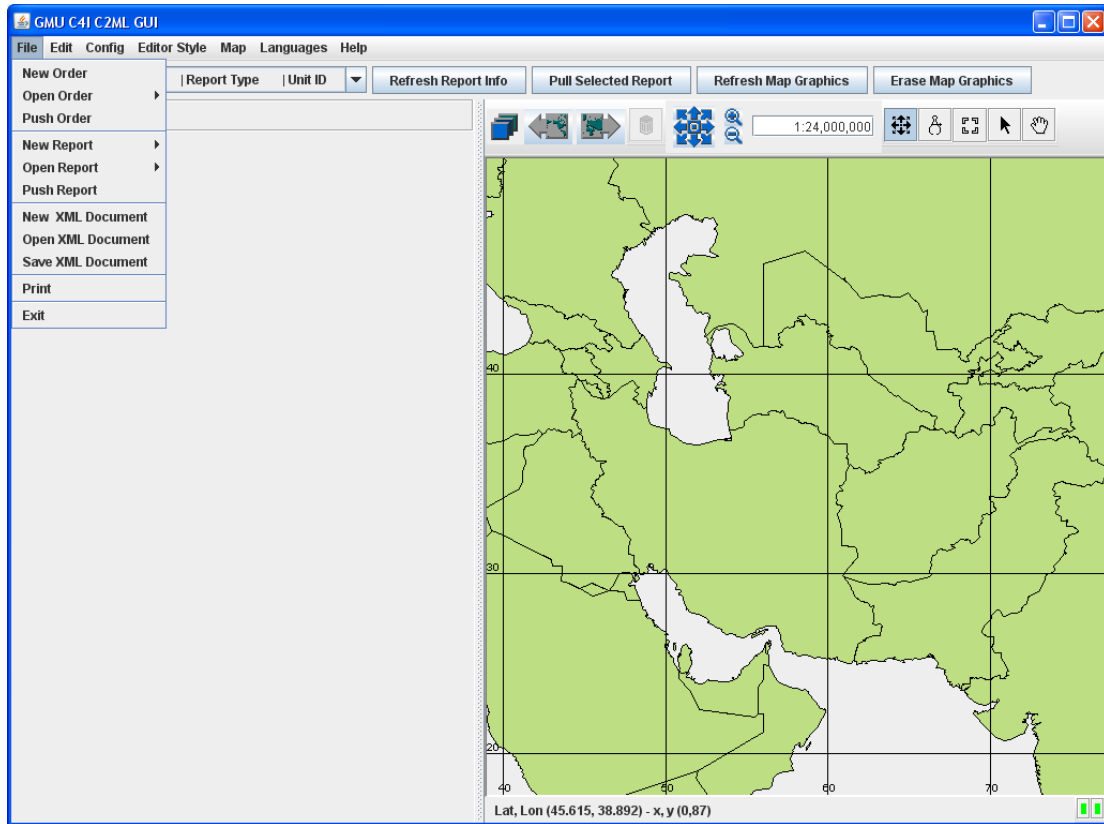
7. Server Unsubscribe

Stop the Subscriber and work in Off-Line Mode. Reports wouldn't be displayed directly on the screen. The user can still open any document either from the file system or from the Web service through using report ID or report info List.

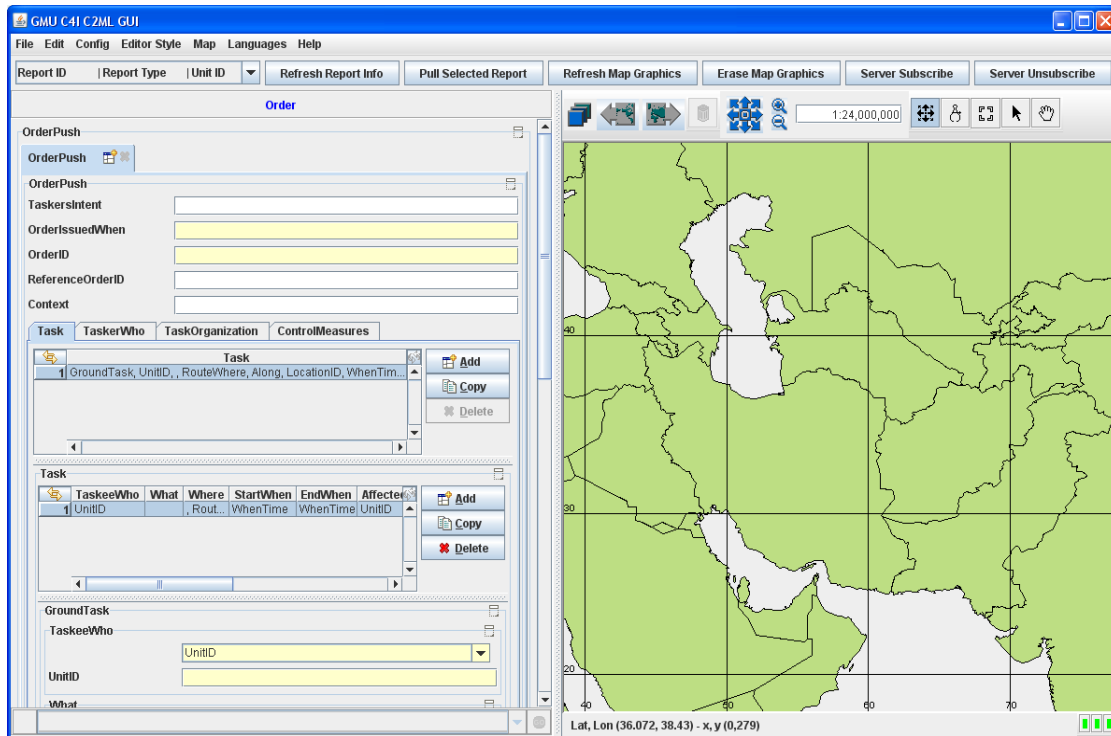
***Note:** the map can display up to 100 graphical objects in order to show relative positions of units or other objects on the map. It is recommended to clear the list of graphical objects before reaching the maximum capacity of 100, especially when receiving reports online from the "Subscriber".*

- **Menus:**

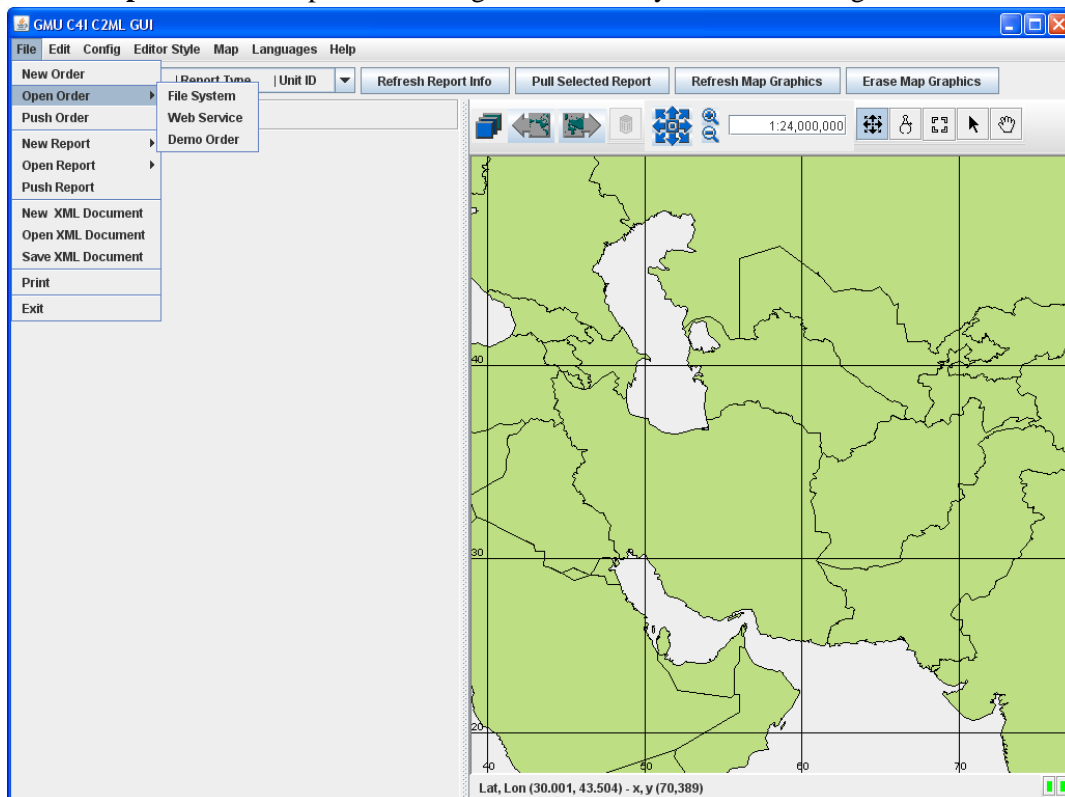
1. **File Menu:**



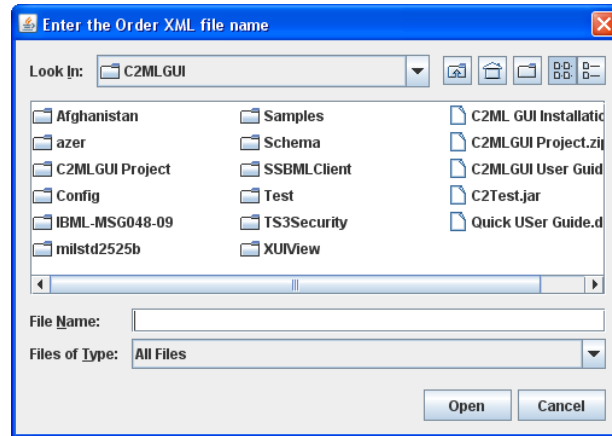
- a. **New Order** : creates a new BML Order in the left side pane of the GUI (The editor).



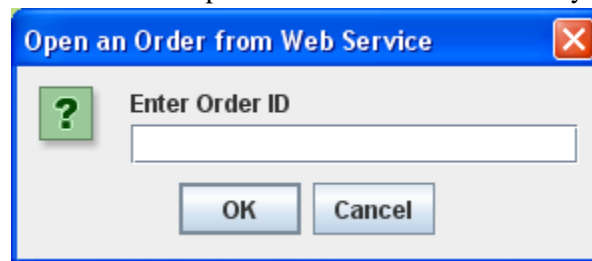
b. **Open Order** : Open an existing order from any of the following



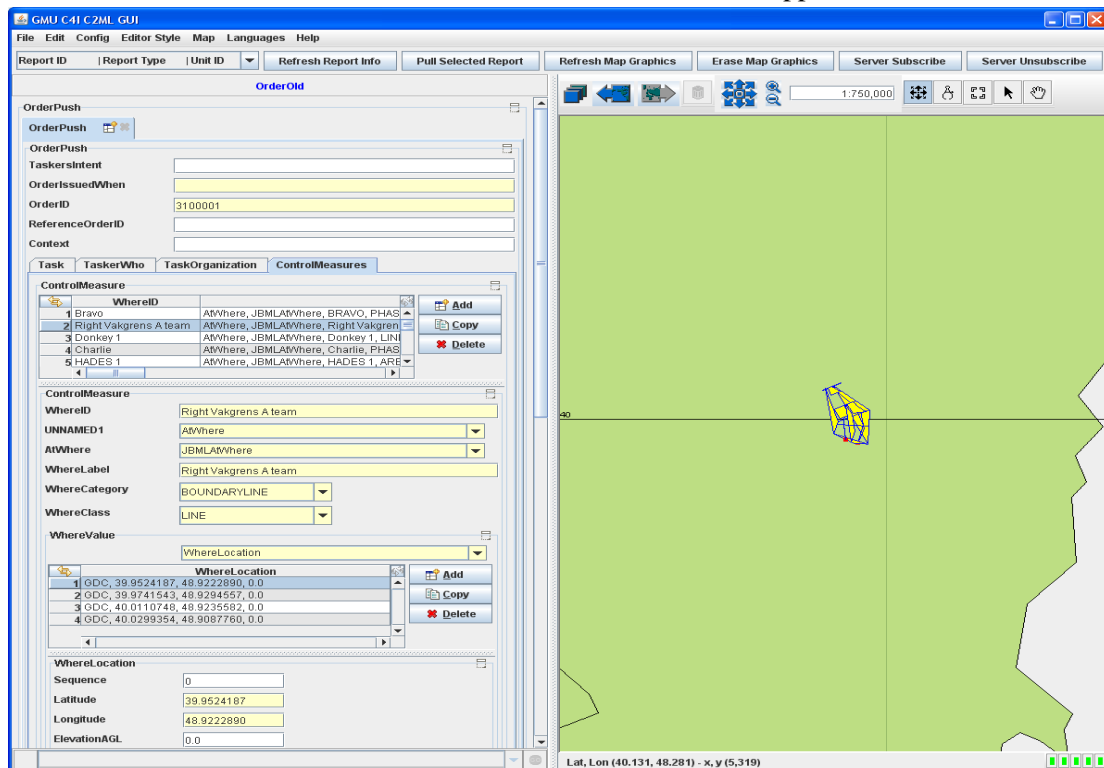
1. **File System** : any saved order in any file system location.



2. Web Service : Open order from a web service by Order ID.

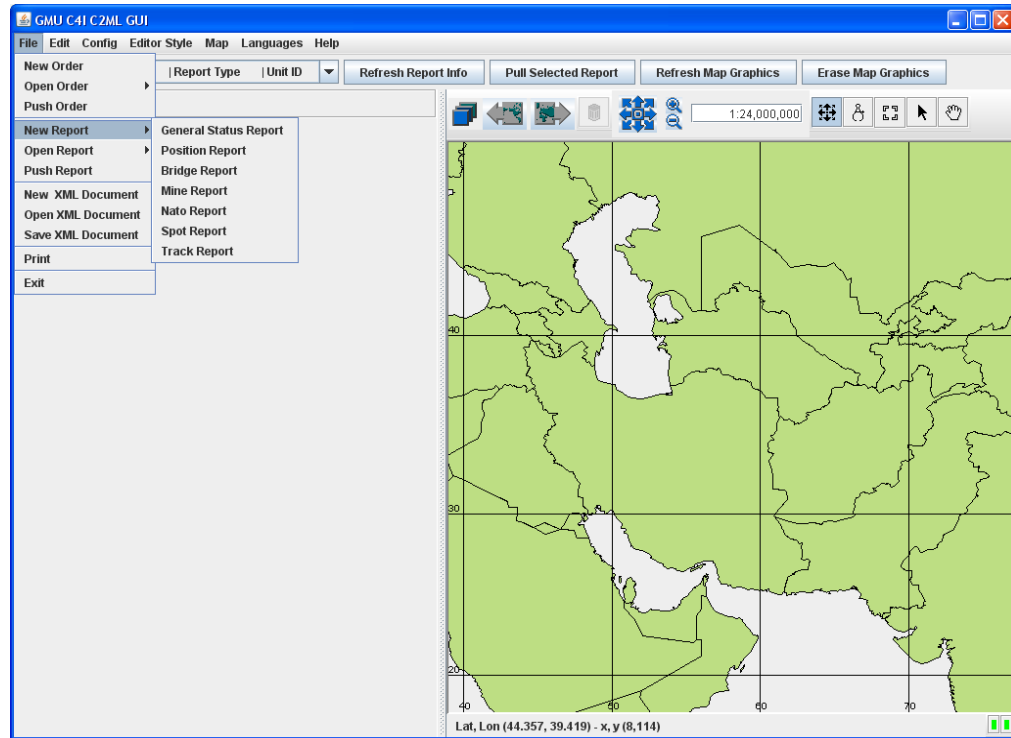


3. Demo Order : a demo order is included with the application



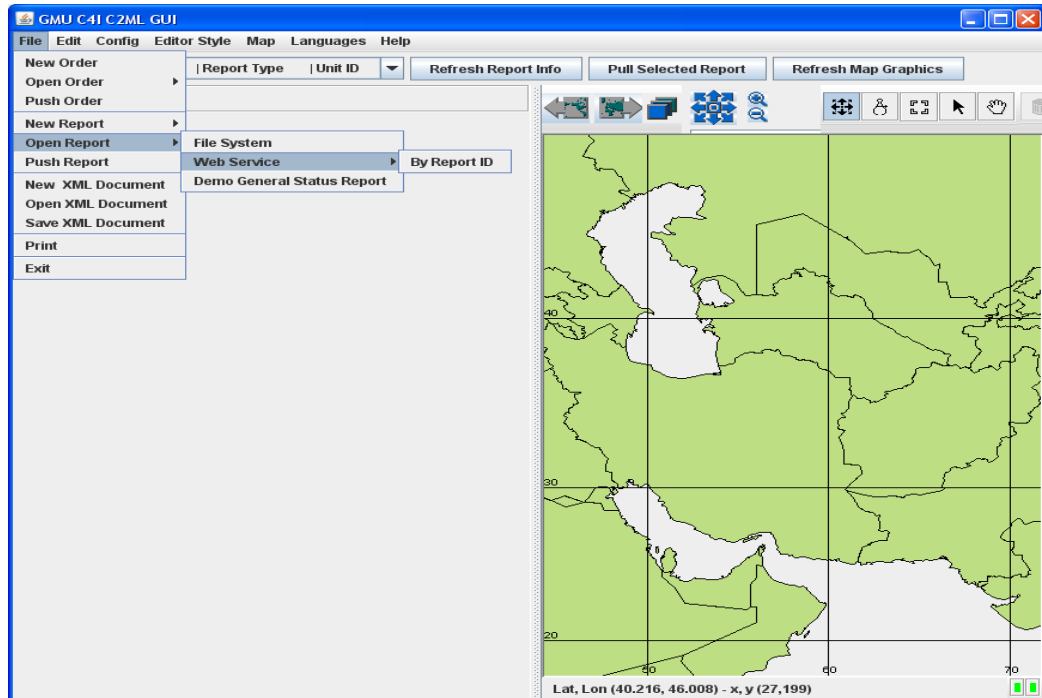
c. **Push Order** : Push the currently edited order through the SSBMLClient

d. **New Report** : The user can create all types of Reports :



1. General Status Report
2. Position Status Report
3. Bridge Report
4. Mine Obstacle Report
5. Nato Spot report
6. Spot Report
7. Track Report

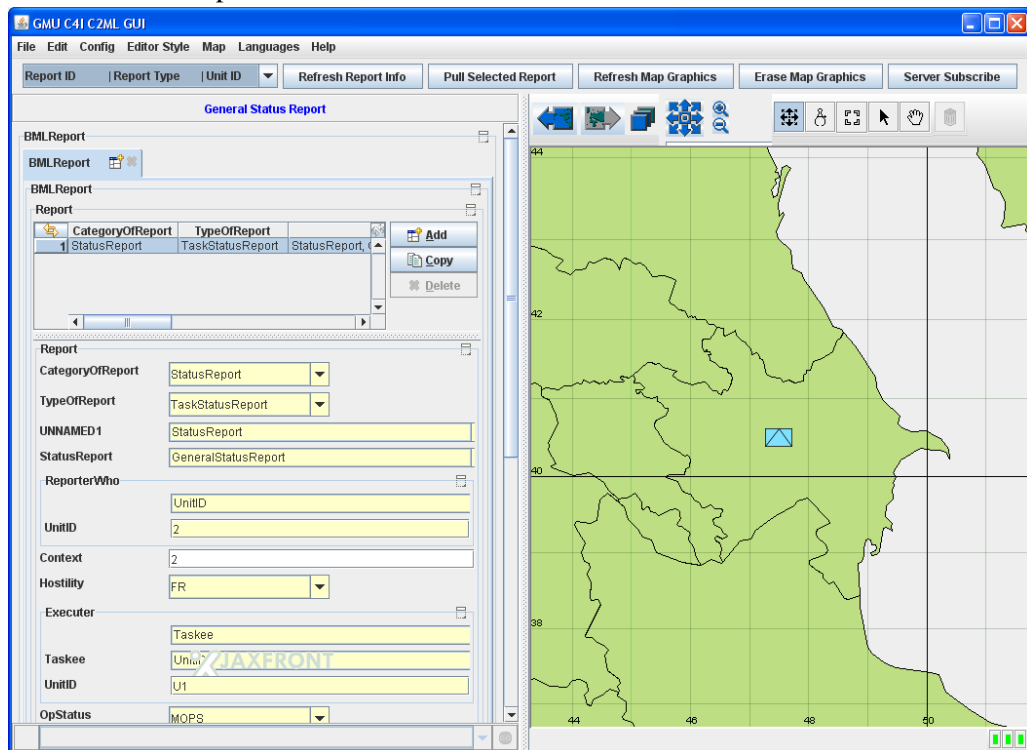
e. **Open Report** : The user can open all types of Reports through any of the three options:



1. **File System:** The user selects the report xml file through the File Chooser

2. **Web Service > By Report ID :** The user enters the report ID to pull from the Web Service

3. **Demo General Status Report :** The user can open an embedded demo General Status Report



- f. **Push Report** : The user can push all types of Reports
Note: This option will rarely be used because most of the time reports will be noticed by the tool and processed to be displayed in the editor and on the map
- g. **New XML Document** : The user can create and edit any type of XML Document, given he provides the XML Schema for that document (XSD).
- h. **Open XML Document** : The user can create open any type of XML Document, given he provides the XML Schema for that document (XSD).
- i. **Save XML Document** : The user can save the edited XML Document :
- j. **Print**: This menu selection will print the current editor document to a PDF file.

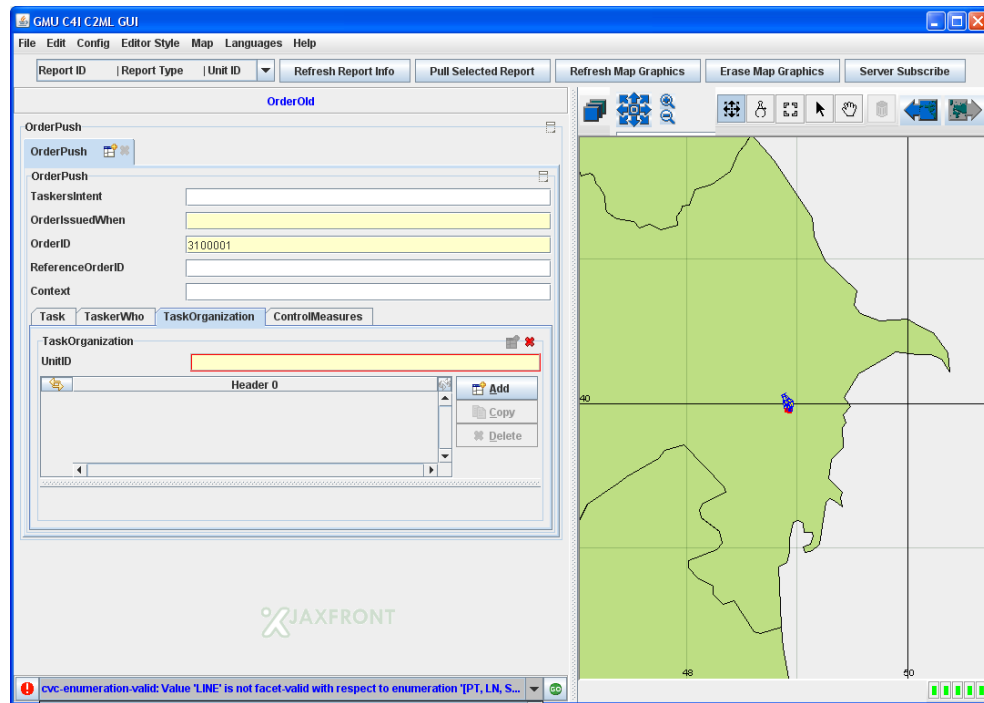
The screenshot shows a PDF form titled "test.pdf" in Adobe Reader. The form is titled "OrderPush" and contains several sections:

- OrderPush (1)**: A section header.
- TaskersIntent**: A text field.
- Task**: A section header.
- Task**: A text field with a radio button next to "GroundTask".
- GroundTask**: A section header.
- GroundTask (1)**: A section header.
- TaskeeWho**: A text field with a radio button next to "UnitID".
- What**: A section header.
- WhatCode**: A text field with the value "SEIZE".
- Where**: A section header.
- WhereID**: A text field with the value "HADES 3".
- UNNAMED1**: A text field with a radio button next to "AtWhere".
- JBMLAtWhere**: A section header.
- WhereLabel**: A text field with the value "HADES 3".
- WhereCategory**: A text field with the value "AREAOINTEREST".
- WhereClass**: A text field with the value "AREA".
- WhereValue**: A text field with a radio button next to "WhereLocation".
- WhereLocation**: A text field.

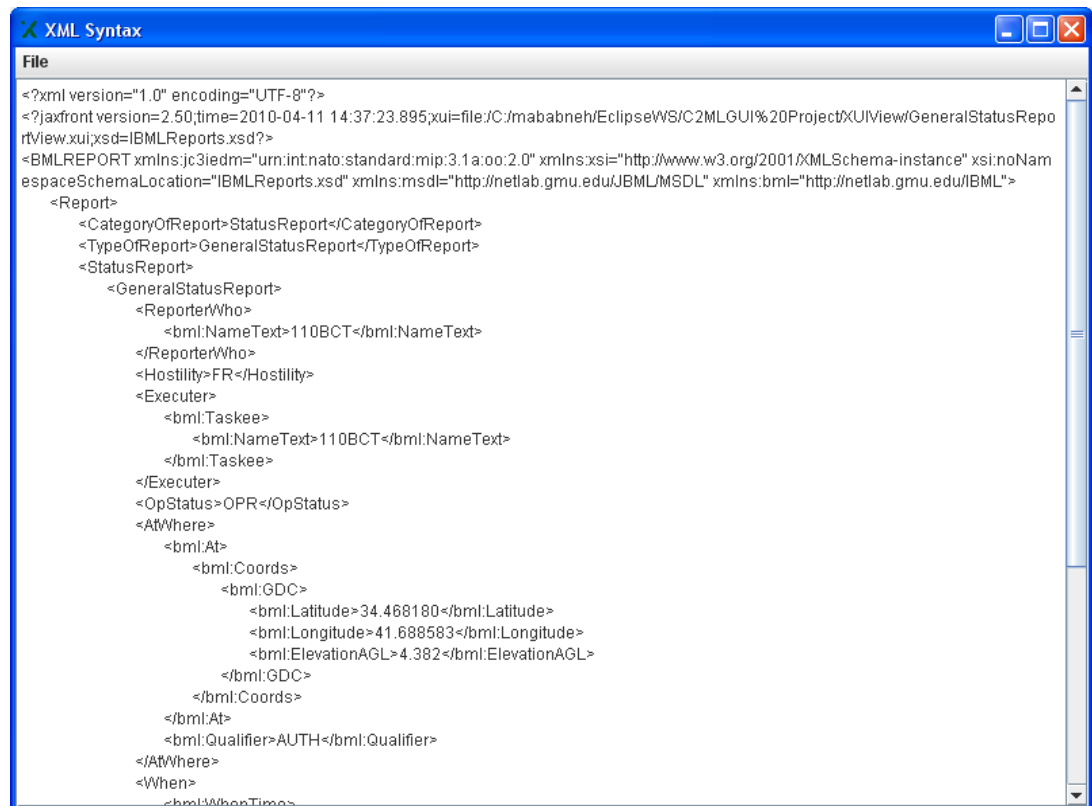
- k. **Exit** : This menu selection will exit the tool.

2. Edit Menu:

- a. **Validate** : The user can validate any document in the editor and get notified of any element that is not valid through a red line around the field and the details in the status bar.



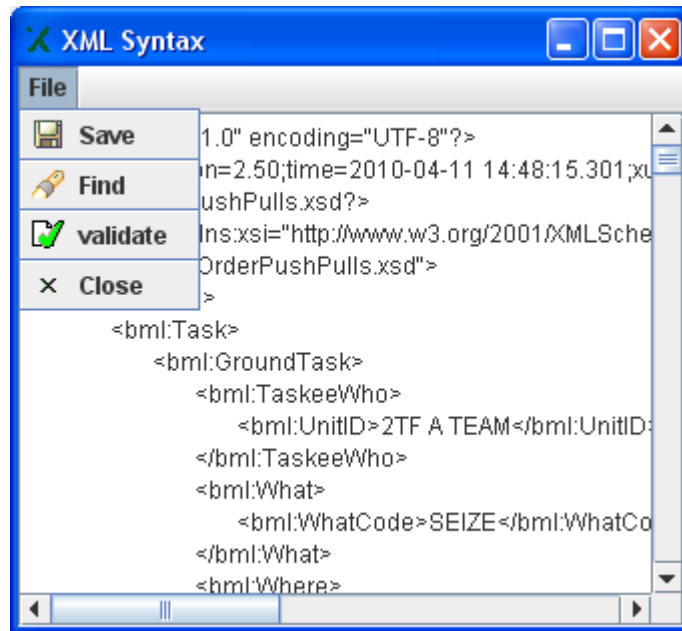
- b. **Serialize** : The user can see the source of the edited XML document.



With more options to :

1. Save the XML source
2. Find any text in the source

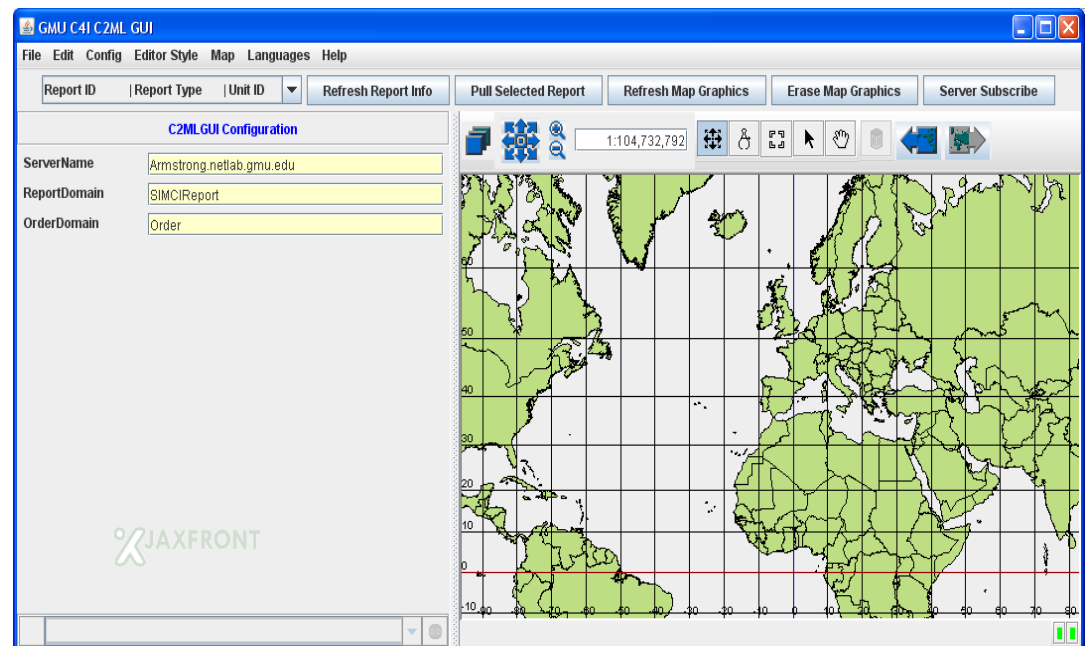
3. Validate the source against its schema
4. Close the source view.



3. Config Menu:

- a. **Load :** The user can load the BMLC2GUI Configuration file (C2MLGonfig.XML) , which itself was created using the tool. The user can change the following Configuration Items:

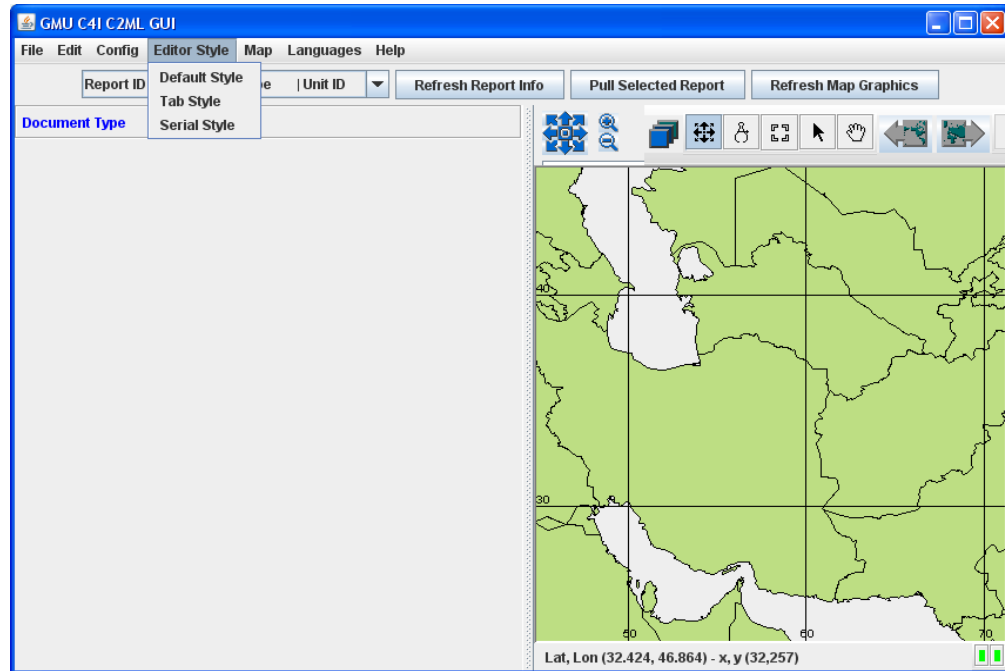
- 1.SBMLServer Name
- 2.Report Domain Name
- 3.Order Domain Name



- b. **Save** : The user saves the configuration File

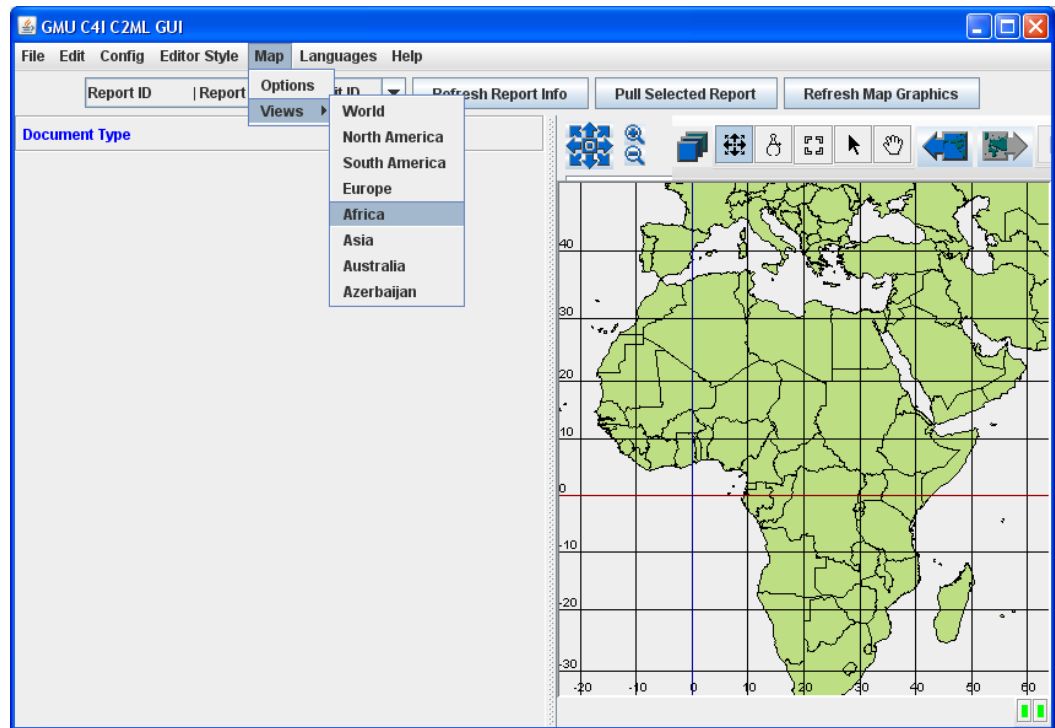
4. **Editor Style:**

- a. **Default Style** : The default style is the tree node style. This mode will be used if no XUI file in presence.
- b. **Tab Style** : most of the used styles currently implemented are using this style.
- c. **Serial Style** : a view style that is currently unimplemented



5. **Map Menu:**

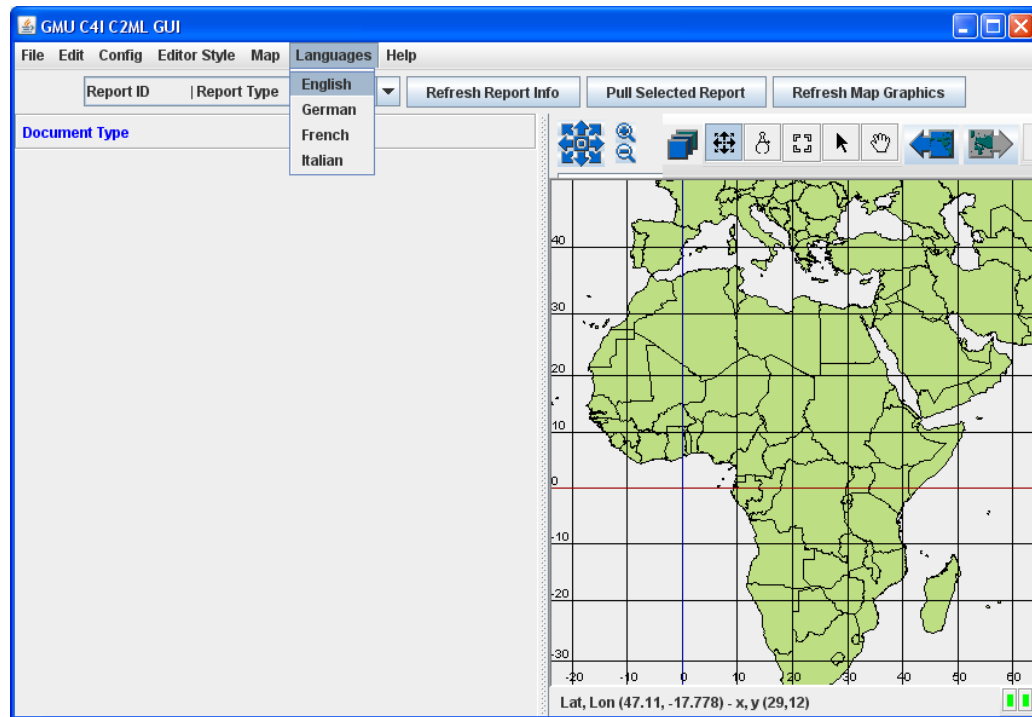
- a. **Options** : not implemented in this release
- b. **Views** :The user can change the viewable area of the map according to the following options:
 1. World
 2. North America
 3. South America
 4. Europe
 5. Africa
 6. Asia
 7. Australia
 8. Azerbaijan



6. Language Menu:

The user can select to display the documents in any of the following languages:

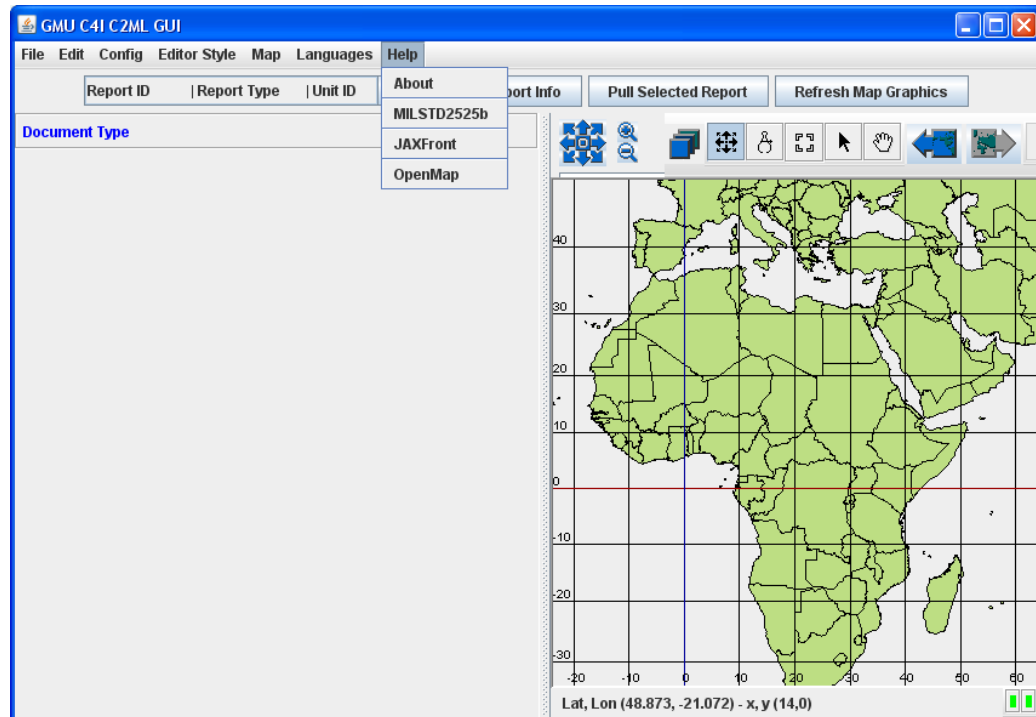
- a. **English** : The currently used language
- b. **French** : not implemented in this release
- c. **German** : not implemented in this release
- d. **Italian** : not implemented in this release



7. About Menu:

Contains help and information about the tool:

- a. **About :** The developer of the tool
- b. **MilStd2525b :** The user can take a look at the MilStd2525b Symbols. The tool uses the symbols automatically according to the unit information if available.
- c. **JAXfront: Information about JAXFront**
- d. **OpenMap : Information about OpenMap**



Map Data Files:

Note: BMLC2GUI used and tested shape files for Azerbaijan and Afghanistan. These files are not included in this posting. The user is responsible for getting these files or implementing any others. Instructions for implementing shape files are as below. Afghanistan's data was available through this web site <http://www.aims.org.af/>

The BMLC2GUI is using OpenMap as its mapping tool. So, it is capable of doing anything possible in OpenMap ver 4.6.5.

This release uses ESRI Shape files (.shp). The user can add/ remove any shape data file by editing the BMLC2GUI.properties file that exists in the package folder.

The user should follow the following instructions

1. The user should add/remove the name of the layer first. In the BMLC2GUI.properties the user can find the c2ml.layers at line 40.
2. Any layer can be added/ removed an any manner and order.
3. The most important thing is to keep the last two layers as is and always last ([Graticule World](#))

```
#
c2ml.layers= AZswamp AZpipelines AZpowerlines AZrailroads AZroads
AZwater2 AZwater AZlandmarks AZtracks AZtrees AZboundaries
AF_settlements AF_airport airfeilds AF_health_facilities AF_lakes
AF_district_boundary AF_international_boundary Af_Rivers
AF_irrigated_areas AF_landcover AF_provincial_boundary
AF watersheds AF river region graticule world
```

4. The user should define the required properties such as: Java Class of the Layer, physical file and Location, Color,.....

Example:

```
#
*****
*****
# Afaghanistan watersheds
#
*****
*****
AF_watersheds.class=com.bbn.openmap.layer.shape.ShapeLayer
AF_watersheds.prettyName=AF watersheds
AF_watersheds.shapeFile=C://BMLC2GUI//Afghanistan//watersheds//watershed.shp
AF_watersheds.spatialIndex=data/azer/vmap_area_thin.ssx
AF_watersheds.lineColor=007FFF
AF_watersheds.fillColor=007FFF
```

A cut version from the currently used c2ml.property file is as follows :

```
# *****
# Properties file for BMLC2GUI
# Desc : The purpose of this file is remove the hard coding of Shape
#        Layers inside the Java Program. The Layers related to any
#        part of the world can be added in this file without modifying
#        the program code.
# Author : Mohammad Ababneh - GMU C4I Center
# Date : 12/28/2009
# *****

# #####
# These properties define the starting projection of the map.
# These properties are listed in com.bbn.openmap.Environment.java,
# and affect the initialization of the application.
# #####

# Latitude and longitude in decimal degrees
#c2ml.Latitude=41.5f
#c2ml.Longitude=-71f
# Scale: zoom level (1:scale)
#c2ml.Scale=10000000f

# *****
# Layers to be loaded and shown on the map
# *****
# graticule and political layers should be always at the end - for now
# the program will make them initially visible, while the others not.
# to find a better solution later for not finding the suitable put
property

c2ml.components=menuBar fileMenu helpMenu
menuBar.class=com.bbn.openmap.gui.MenuBar
fileMenu.class=com.bbn.openmap.gui.FileMenu
helpMenu.class=com.bbn.openmap.gui.DefaultHelpMenu

# graticule and world should be the last 2

#   graticule world

#
c2ml.layers= AZswamp AZpipelines AZpowerlines AZrailroads AZroads AZwater2
AZwater AZlandmarks AZtracks AZtrees AZboundaries AF_settlements
AF_airport_airfields AF_health_facilities AF_lakes AF_district_boundary
AF_international_boundary AF_Rivers AF_irrigated_areas AF_landcover
AF_provincial_boundary AF_watersheds AF_river_region graticule world
# AF_cultivated_areas : Didn't work - Unknown Problem
# AF_Roads : Unable to construct the layer in OpenMap (Null)
# *****
# Graticule Layer
# *****
graticule.class=com.bbn.openmap.layer.GraticuleLayer
graticule.prettyName=Graticule
```

```

# *****
# World Political Map Layer
# *****
world.class=com.bbn.openmap.layer.shape.ShapeLayer
world.prettyName=Political Solid
world.shapeFile=data/azer/world_adm0.shp
world.spatialIndex=data/azer/vmap_area_thin.ssx
world.lineColor=000000
world.fillColor=BDDE83

# *****
# *****
# Afaghanistan Shape Layers
# *****
# *****

# *****
# Afaghanistan watersheds
# *****
AF_watersheds.class=com.bbn.openmap.layer.shape.ShapeLayer
AF_watersheds.prettyName=AF watersheds
AF_watersheds.shapeFile=C://BMLC2GUI//Afghanistan//watersheds//watershed.s
hp
AF_watersheds.spatialIndex=data/azer/vmap_area_thin.ssx
AF_watersheds.lineColor=007FFF
AF_watersheds.fillColor=007FFF

# *****
# Afaghanistan settlements
# *****
AF_settlements.class=com.bbn.openmap.layer.shape.ShapeLayer
AF_settlements.prettyName=AF settlements
AF_settlements.shapeFile=C://BMLC2GUI//Afghanistan//settlements//07_03_set
tlements.shp
AF_settlements.spatialIndex=data/azer/vmap_area_thin.ssx
AF_settlements.lineColor=777777
AF_settlements.fillColor=ffbdde83

#

# *****
# *****
# Azerbaijan Shape Layers
# *****
# *****

# *****
# Azerbaijan tracks Layer
# *****
AZtracks.class=com.bbn.openmap.layer.shape.ShapeLayer
AZtracks.prettyName=AZ tracks
AZtracks.shapeFile=C://BMLC2GUI//azer//TrackL.shp
AZtracks.spatialIndex=data/azer/vmap_area_thin.ssx
AZtracks.lineColor=777777
AZtracks.fillColor=ffbdde83

```

```
# *****  
# Azerbaijan trees Layer  
# *****  
AZtrees.class=com.bbn.openmap.layer.shape.ShapeLayer  
AZtrees.prettyName=AZ trees  
AZtrees.shapeFile=C://BMLC2GUI//azer//TreesA.shp  
AZtrees.spatialIndex=data/azer/vmap_area_thin.ssx  
AZtrees.lineColor=000000  
AZtrees.fillColor=009040
```