



## A Web and mobile-based system for the coordination of civil protection authorities and population warning

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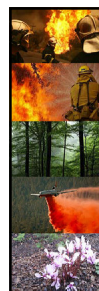
## Contents

- Introduction
- The Prompt Project
- System Architecture
- System Functionalities
- Conclusion – Further Work



## Crisis Management

- Crisis management phases:
  - Preparation and prevention
  - **First response**
  - Recovery
- We focus on first response after an environmental crisis outbreak
- ICT can play a vital role in early warning and response systems
  - Connect detectors, civil protection and people / property in danger
  - Provide automatic response systems



## The Prompt Project

- Proactive Human Response to Wildfires Outbreak: Measure and Prepare for it
- Interreg IVC Project
- <http://www.prompt-interreg.eu/>
- Exchange experiences – good practices to improve regional development policies for coping with fires right after their outbreak in very sensitive areas (e.g. forests)





## Forest Fires

- Natural phenomenon in forest ecosystems, but also one of the greatest important hazards
- Devastating consequences to the environment, life and economy of communities
- Wildfire prevention currently the focus of many efforts
- Less attention to operational readiness and emergency response

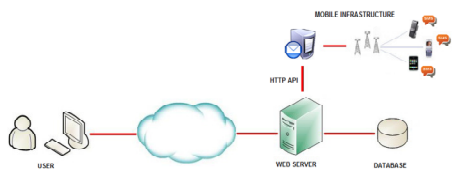


## The Developed System

- Scenario based system for the instant notification and coordination of local authorities after an emergency crisis
- Combines web and mobile technologies
- Originally implemented for the case of forest fires
- However it can be adapted for use in a wide range of crisis situations where mobile infrastructure remains functional



## System Architecture



- Open Source technologies (PHP – Drupal, MySQL)
- Interconnects via an HTTP API with an SMS Gateway to deliver SMSs
- Any SMS Gateway can be used (currently **Clickatell** way)



## Types of Users

- Civil protection
  - Platform administration
  - Organization and execution of scenarios
- Registered users (public organizations, local population that could play a vital role)
  - Receive notifications via SMS
- Guests
  - Access to the public section of the platform

## User Registration

**User account** [Create new account](#) [Log in](#) [Request new password](#)

**Account information**

**Username:** \*

Spaces are allowed; punctuation is not allowed except for periods, hyphens, and underscores.

**E-mail address:** \*

A valid e-mail address. An e-mail from the system will be sent to this address. This e-mail will also be used for notifications by e-mail.

**Personal information**

**Name:** \*

Your name. The content of this field is kept private and will not be shown publicly.

**Surname:** \*

Your surname. The content of this field is kept private and will not be shown publicly.

**Organization:** \*

Your organization. The content of this field is kept private and will not be shown publicly.

**Mobile phone:** \*

Enter a valid mobile phone number for the SMS capabilities. Please include the country code without the leading zero or a + (e.g. 300571234567). The content of this field is kept private and will not be shown publicly.

**PIN code:** \*

Please enter a six-digit personal 4-digit PIN code. The PIN code will be included in the end of each SMS sent by the system in order to verify sender. The content of this field is kept private and will not be shown publicly.

[Create new account](#)

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- Pin Code (included at the end of each SMS)
  - Authenticity of SMS
  - Integrity of SMS

## System Functionalities

**Civil Protection**

- Administer users
- Users' groups
- SMS groups
- SMS
- Scenarios
- SMS History

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- User Groups (e.g. police, volunteers, medical forces etc.)
- SMSs – proactively stored
- SMS Groups
- Scenarios
- SMS History

## Predefined Scenarios

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- Good way to organize the procedure of sending SMS messages to the right users, the right time and with the right order
- 3-step Wizard
- Several phases
- In each phase pairs of SMS groups with user groups are created
- Execute single phase of the scenario or all phases consecutively

## Scenario Wizard

**Wizard**

Define which SMS group will be sent to each users group in every phase. You may add as many phases as you want.

**Step 2**

SMS groups	Users' groups
Early Warning	Medical forces
Mountain forest fires	Police
Population instructions	Volunteers

[Add one more phase](#)

Phase 1: Early Warning <- -> Police

Phase 2: Mountain forest fires <- -> Medical forces

Phase 3: Population instruction <- -> Volunteers

[Save scenario and finish wizard](#)

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## Scenario Wizard



## Use Case Scenario

1. "Civil protection in Western Greece elaborates and designs an operational plan that could be applied in case of forest fires outbreak during the summer period. In the framework of this plan, working groups that involve civil protection, local authorities and local population are formed. Each group has specific tasks to accomplish and a very important point for the success of the plan is the early warning and successful coordination of all involved parts."
2. "A forest fire breaks out near Ancient Olympia. Civil protection should apply the operational plan in order to warn the involved parts and coordinate their reactions."
3. "The situation met with success. The fire danger was eliminated and no one was injured."



## Pilot Exercise (first pilot use of the System)

- Friday 24/6/2011 at Kalavryta, Greece
- In the framework of the Prompt Project
  - 6th Simulation and Contingency Plan Exercise
- Readiness exercise to tackle with forest fires
  - Simulation of forest fire incident
  - Review contingency plans
  - Exploit new means of communication
- Civil protection officials from EU countries will follow the exercise



## Conclusion – Further Work

- Scenario based system for the instant notification and coordination of local authorities after an emergency crisis
- Currently deployed for the case of forest fires but can be adapted for other emergency situations
- In the future:
  - Evaluation after a period of pilot use
  - Extend functionality to MMS (videos, photos from emergency area)
  - 2-way communication (feedback)



Thank you very much for your attention!

Questions?