Firepoint: Application for Identified Fires Notification

Inessa Sofronova, Alexander Troshkov, Artyom Timonin, Artyom Kalinin, Kirill Kulakov, Alexander Kolosov, Alexander Borodin

Petrozavodsk State University Department of Computer Science



This project is supported by grant KA179 of Karelia ENPI programme, which is co-funded by the European Union, the Russian Federation and the Republic of Finland.



11th FRUCT conference April 23–27, Saint-Petersburg, Russia



Table of contents

- Problem
- Idea
- Use cases
- Architecture
- Application forms
- Implementation
- Current state
- Plans



200

ъ

Problem

- Enormous damage to the environment
- People and animals dying
- Destroying of huge areas of forests

What can we do?

- Provide users with information about the surrounding environment
- Ask for feedback in case of a fire site detection







Problem: user's location

- Can not be associated with any street or house
- Use of geographical coordinates is OK



Idea

Providing the user with:

 Information about fire detection, obtained from the FIRMS service

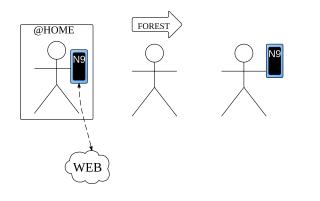
• Geographical map with fire points

• Connection with emergency services



Use cases: download data before campaign

- Downloading map with fires at home
- Going to forest
- Using downloaded data



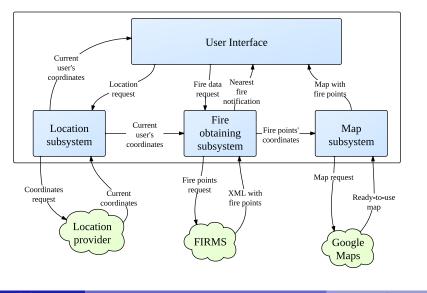
cs.karelia.r

Use cases: face to face with fire

Actors

- Forest rangers
- Hunters
- Mushroom and berry pickers
- What to do?
 - Teach them how to behave in forest
 - Teach them what to do in case of fire
 - ▶ Provide them with a functionality of an emergency call

Architecture



ru

Application forms: maps with fire points





Sac

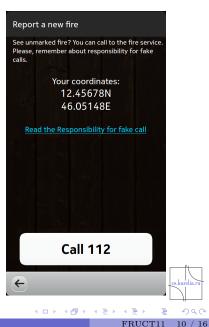
Application forms: report about new fire

Discover a new fire? Report about it to emergency service

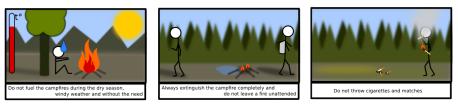
Information, provided for emergency call:

 Your current location (geographical coordinates)

• Article about responsibility for fake call



Application forms: comic strip 'How not to cause a fire'







メロト メタト メヨト メヨト

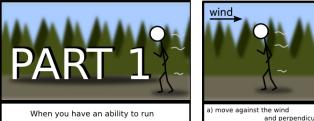


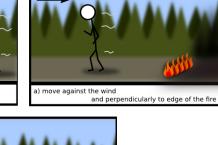
Sac

Inessa Sofronova

FRUCT11 11 / 16

Application forms: comic strip 'What to do in case of fire'





A B +
A B +
A





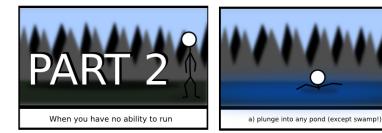
Dac

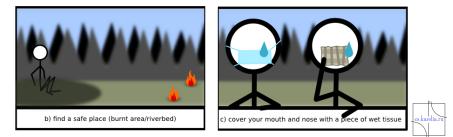
Inessa Sofronova

FRUCT11 12 / 16

э

Application forms: comic strip 'What to do in case of fire'





A B +
A B +
A

- E - F

Inessa Sofronova

FRUCT11 13 / 16

Dac

Implementation

Third-party services:

- Google Maps providing maps
- Yandex.Locator location determination over mobile network
- The Fire Information for Resource Management System (FIRMS) fire activity data

Programming tools: Qt developing platform, QML (UI), HTML+JS (map, clusterization), Bazaar (distributed revision control system)

Firepoint is licensed under GNU GPL v.2

FRUCT11

14 / 16

Current project state

Finished coding

- \blacktriangleright Qt/C++: 10 files, 718 lines
- QML: 18 files, 2791 lines
- ▶ Javascript: 4 files, 761 lines
- ▶ HTML: 1 file, 137 lines
- Finished testing
 - ▶ 101 tests performed
- Publishing in Nokia Store in progress

Plans

- Make available for Symbian (not only MeeGo Harmattan)
- Bring new functionality: mark different types of points: illegal logging, illegal carwash, illegal landfills

Project hosting: http://launchpad.net/firepoint

 $Promo-site: \ http://oss.fruct.org/projects/firepoint$

Thank you for attention!