YouEHelp
Distributed Participatory Emergency Aid

S T U · · · Faculty
F I I T · · · of Informatics
· · · · and Information
· · · · Technologies

PeWe@FIIT personalized web group

fiit.src

Martin.Labaj@computer.org

Overview

YouEHelp

- mobile phone application

- detects call on 112/911 and allows user to broadcast request for help

- P2P communication with retransmission to increase range

- adding details as they come, even with subsequent requests

and more (misuse prevention, location pointer, range management, cold start, ...)

1. Alice

(witnesses acute allergic reaction)

- calls 112
- **broadcasts distress message in YouEHelp, enters details**

```
You called 112.          What is going on?
Call community help,
too?                      Medical

    Yes                   Car accident

    NO                    Fire

                          ...
```

2. Bob

(emergency health professional)

- gets alerted about situation
- is guided precisely to John
- has no first aid kit with him, **adds item request into message**

```
Medical emergency        Need more?
nearby!
                         Supplies
         68 m
                         People
    Respond
                         ...
    Leave out
                         Emergency over
```

Bluetooth (10 m)

Wi-Fi indoors (30 m)

Wi-Fi outdoors (100 m)

Model scenario

3. Carol

(has severe allergy, always carries epinephrine autoinjector)

- gets alerted about request
- rushes to assist Alice and Bob

Together, immediate help is given before ambulance vehicle arrives and takes over the situation.

* Not limited to medical emergencies only.

Improvements

COLD START

- not a safety concern
- media propagation
- no discovery of others

PRIVACY

- annonymous relaying
- device decides, personal data are not leaving it

MISUSE

- cross-verification
- traceable
- not worse than 112
- criminal prosecution

OVERREACTION

- selective alerting
- adaptive warning
- intelligent propagation

Person info

- trainings, skills
- available equipment
- chronic diseases
- verification

Sensing

- rapid deceleration
- very high temperature
- external warnings

Adaptivity

- high speed travel => on highway => put traffic buttons first

Location

- GPS
- GSM BTS/WiFi APs
- accelerometers
- magnetic sensors

Assistance

- first aid instructions
- safety rules
- advices

Non-emergency

- communication, games
- prioritization
- clear differentiation