Alertrix

Using matrix to coordinate emergency services

Alertrix

The magic of an emergency call

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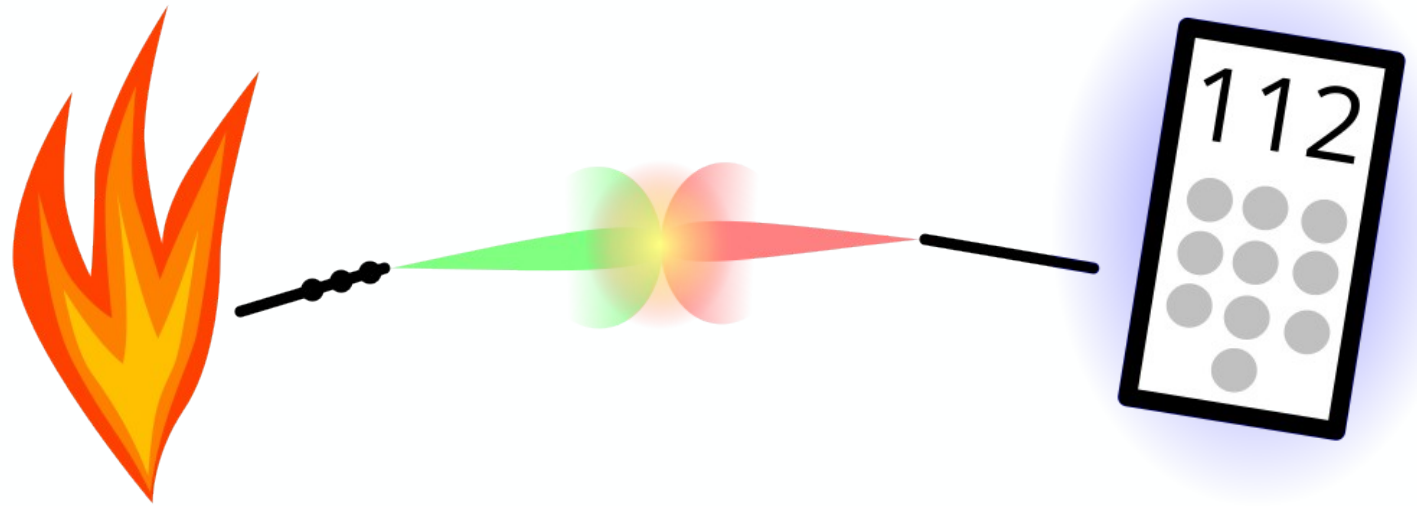
Your average fire fighter

Members at the 31st December 2021

Mitglieder zum 31. Dezember 2021

- Voluntary Fire Fighters
- Professional Fire Fighters
- Plant Fire Department
- Youth

Total=1,385,406

https://www.feuerwehrverband.de/app/uploads/2023/11/231128_Statistik-Webseite.pdf

Alertrix
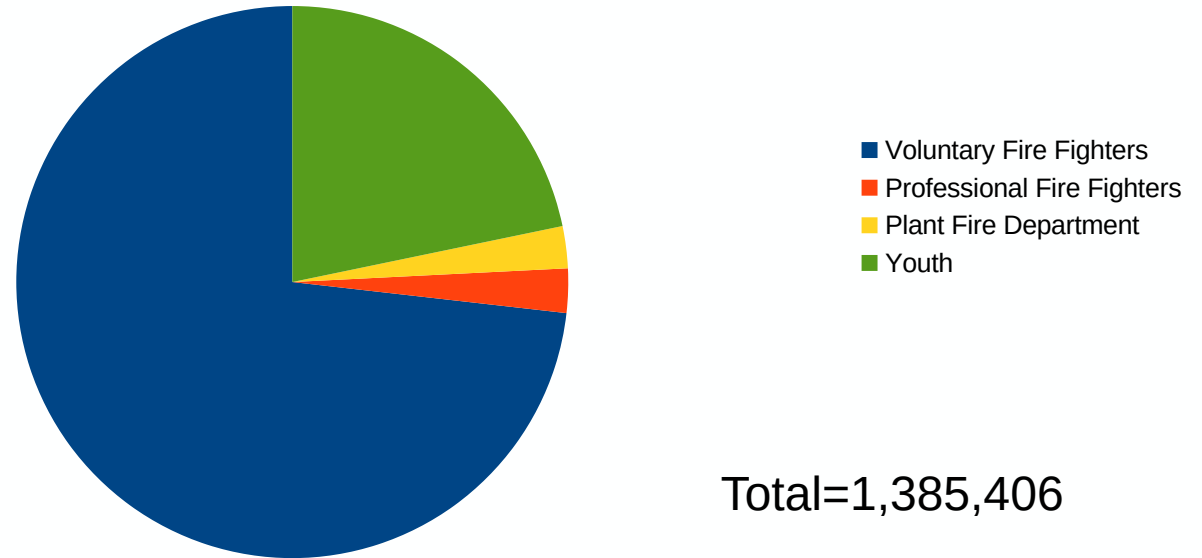
Your average fire fighter

- Plumber
- Electrician
- Student
- Dentist
- Teacher
- Engineer
- …
- What's your neighbours job? They could be a firefighter too

From anywhere to the emergency site

Alertrix

From anywhere to the emergency site

1) Emergency Call

2) Alert

3) Gather at the department

4) How about others?

5) Go

- Siren

- Pager
  - Silent
  - Includes data

- Smartphone
  - Bidirectional
  - Who is available?
  - When will they arrive?
  - Which qualifications do they have?

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Let's make an app for that

Let's just build a web service so you can quickly tell the others your arrival time.

- Multiple proprietary platforms many years ago

Let's not just build a web service so you can quickly tell the others your arrival time.
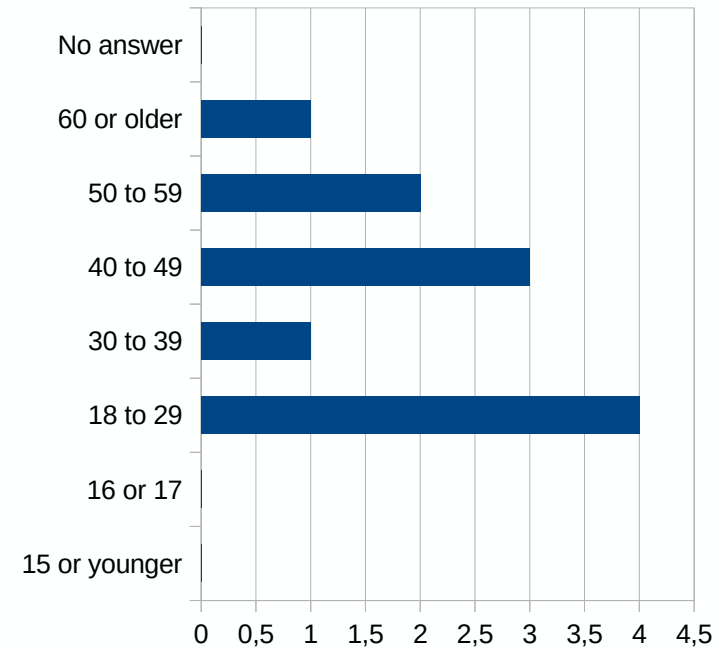
- Fabian Becker, 2023

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Who are we talking about?

For which type of emergency service are you filling in this survey? (n=12)

- ■ Voluntary Fire Department
- ■ Professional Fire Department (Not ambulance)
- ■ Plant Fire Department
- ■ Forced Fire Department
- ■ Ambulance (voluntary)
- ■ Ambulance (professional)
- ■ DLRG
- ■ THW
- ■ Police
- ■ VOST
- ■ Other
- ■ No answer

Age (n=12)

Age	Count
No answer	0
60 or older	1
50 to 59	2
40 to 49	3
30 to 39	1
18 to 29	4
16 or 17	0
15 or younger	0

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What's good?

- Signal
  - Fast, secure
  - Opensource, encrypted
- Briar
  - Decentralized
- iMessage
  - Sending Media
- WhatsApp
  - Live location sharing

- GroupAlarm
  - Does not require an App (uses SMS)
- Divera
  - Communicating my arrival time

What's bad?

- Discord

  - Focus is on gaming

- iMessage

  - Proprietary, depends on Apple,
    no Android app

- WhatsApp

  - Proprietary, depends on Meta,
    privacy invasive

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Liked Features

- Text messaging
- Media transfer
  - Images
  - Videos
  - Files
- Location Sharing
- Voice Call
- Surveys
- Threads
- Searching through messages
- Read receipts

- Picking approx arrival time from a list of presets (mostly experience)
- Specifying approx arrival time manually (mostly guessing)
- Automatically specifying arrival time from current location (mostly guessing)
- Custom alarm sounds (mostly experience)
  - Different per keyword
  - Different per company
- Emergency related group chats
  - All responders
  - Per qualification
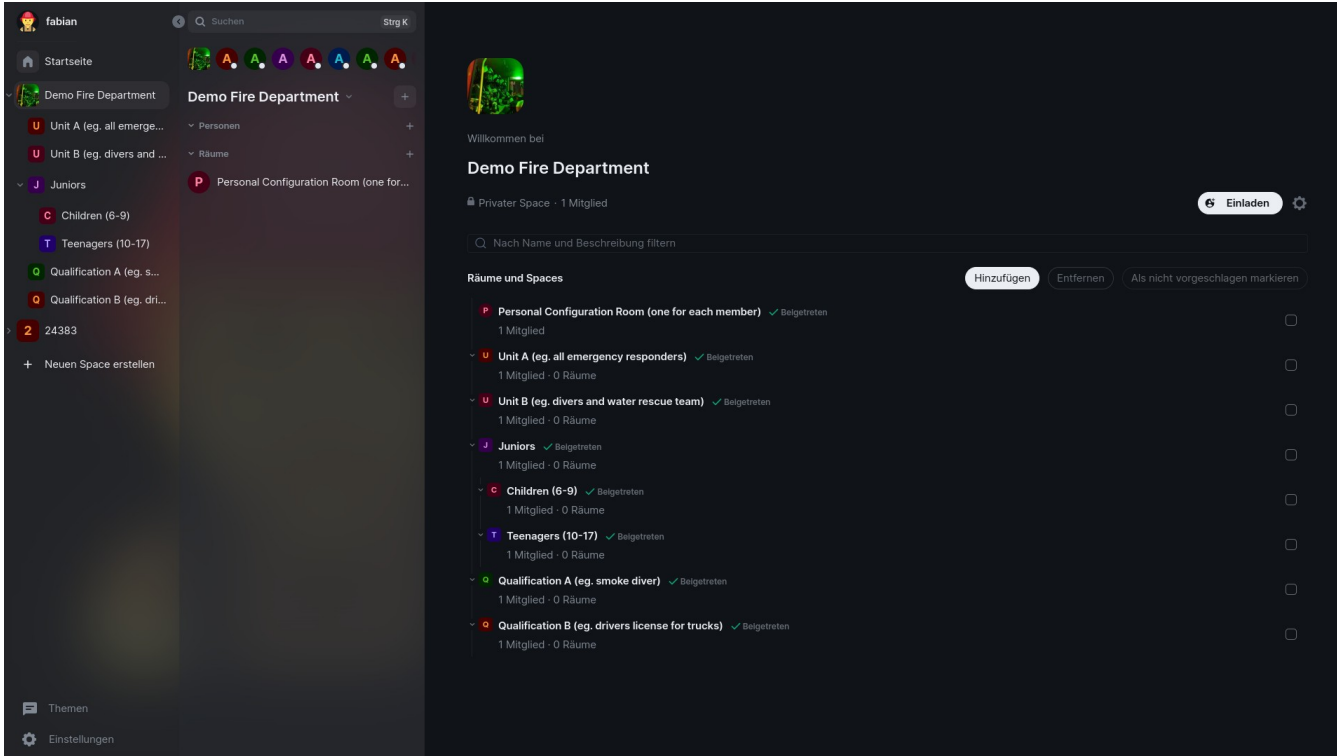
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Disliked Features

- Voice Messages

Quite a lot…

if you are not
open source and
have to reinvent
the wheel…

Put it into matrix

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And someone/-thing to forward the information to the correct recipients

The current state

Some definitions

 Alertrix

| Company	Collection of people, has one or more units → Space
Unit	Group of people (preferably they also are in the company) with specific traits (eg.: active fire fighter, smoke diver etc) → Space
Configuration Room	Direct message between the company's bot account and the user. Stores preferences in state events → Direct Message Room
Alert Channel	Send emergency information to the user, user sends responses → Room

Defining companies

```
{

  „room_id": „!company_space:alertrix.net",

  „type": „net.alertrix.company",

  „state_key": „",

  „content": {

    „inbox": „@alertrix_bot_per_comp:alertrix.net",

    „version": 0

  }

}
```
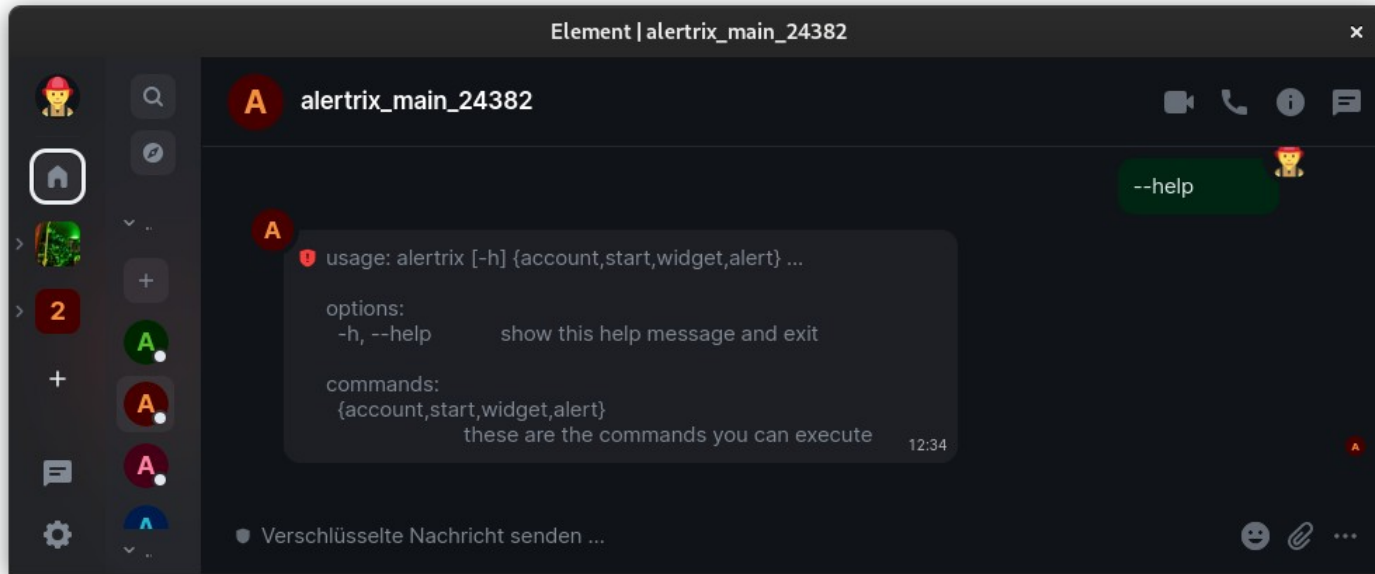
…and units

```
{

  „room_id": „!company_space:alertrix.net",

  „type": „net.alertrix.company.unit",

  „state_key": „!unit_space:alertrix.net",

  „content": {

    „version": 0

  }

}
```
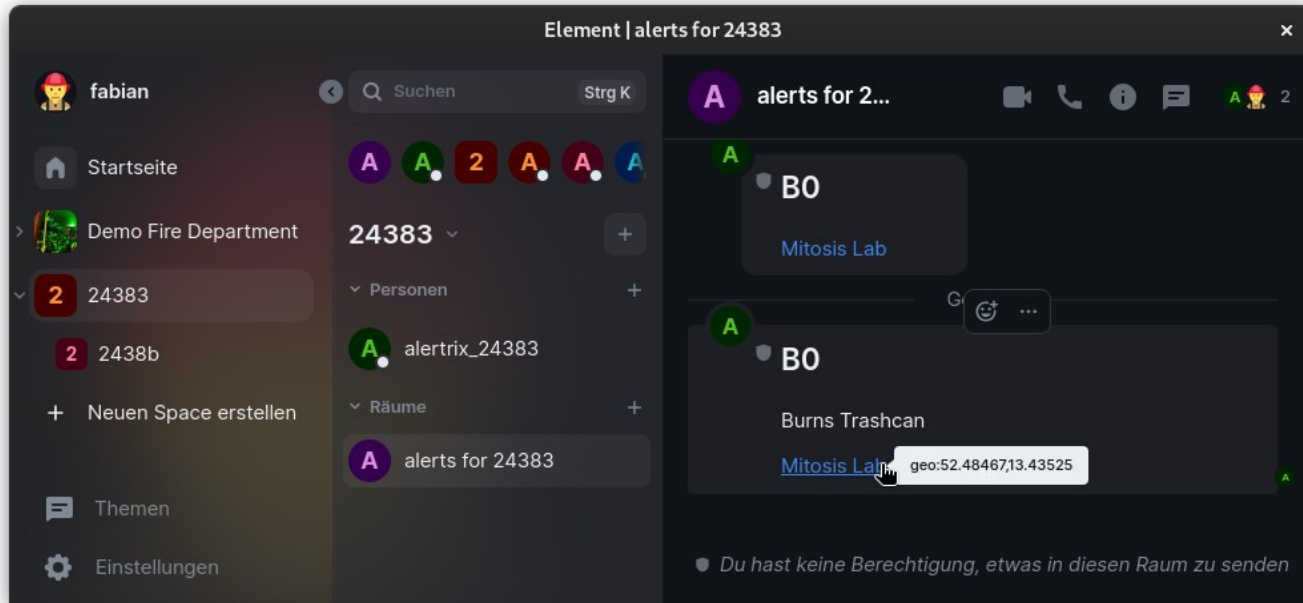
UI enhancement by website

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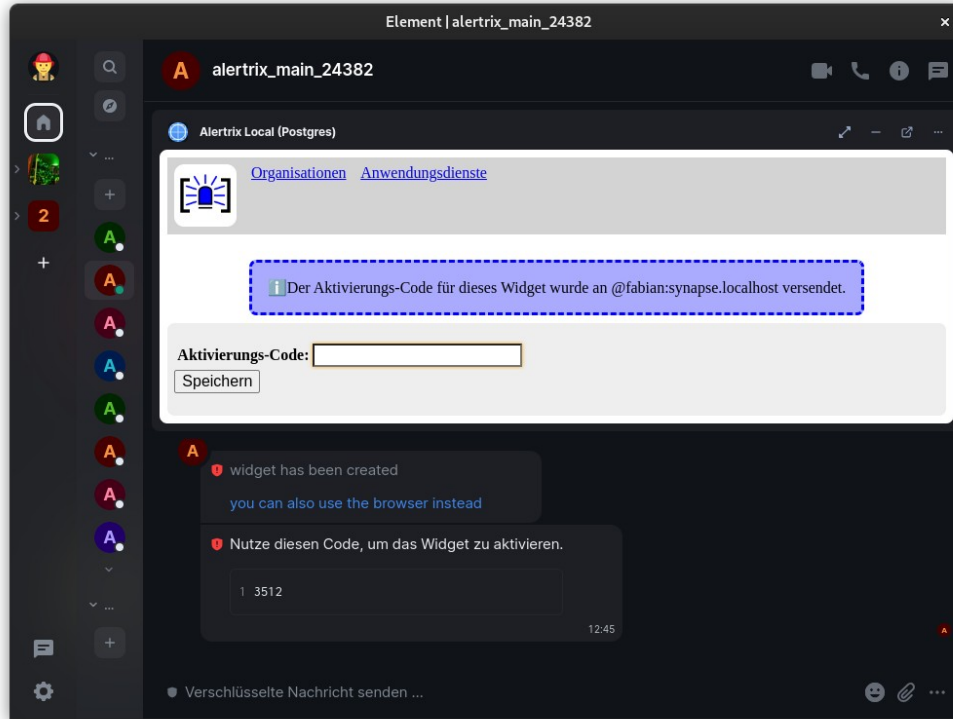
Chat Line Interface

Chat Line Interface

Short term goals

- Arrival time feedback by survey

- Display arrival times in a widget/iframe

  - Phone view

  - Monitor in garage

- Group chat for emergency related matrix events

There can be more…

Communication for large emergencies

- Create a space for each emergency.

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Tele-Health-Physician

- Remote support for ambulances from a doctor.

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Spontaneous helpers

- Public units for civilians, who want to help, but are not in the company.

Zum Abmarsch fertig.