



motionEye on RPI



WAJUG

Features

- Web-based application
- Desktop and mobile views
- Motion detection
- Save still images (jpg) and/or movies (avi, mov, mp4, mkv, etc.)
- Timelapse movies
- Notifications
- Upload service: Google, Dropbox



Desktop view

Reception

General Settings

ON

Show Advanced Settings

ON

Administrator Username

admin

Administrator Password

Surveillance Username

pi

Surveillance Password

Current Version

0.7

Software Update

Check

Video Device

ON

Camera Name

Reception

Camera Device

http://

Light Switch Detection

ON

Automatic Brightness

OFF

Brightness

0% 25% 50% 75% 100%

Contrast

0% 25% 50% 75% 100%

Saturation

0% 25% 50% 75% 100%

Hue

0% 25% 50% 75% 100%

Video Resolution

640x480

Video Rotation

180°

Frame Rate

1 5 10 15 20 25 30

File Storage

Root Directory

/media/data/picam-reception

Disk Usage

164.5/220.0 GB (74%)

Text Overlay

ON

Left Text

Custom Text

ETAA/VIRCEPTION

Right Text

Timestamp

motionEye

ISPE Picam 2

2019-11-28 17:42:46

SUPERCAM

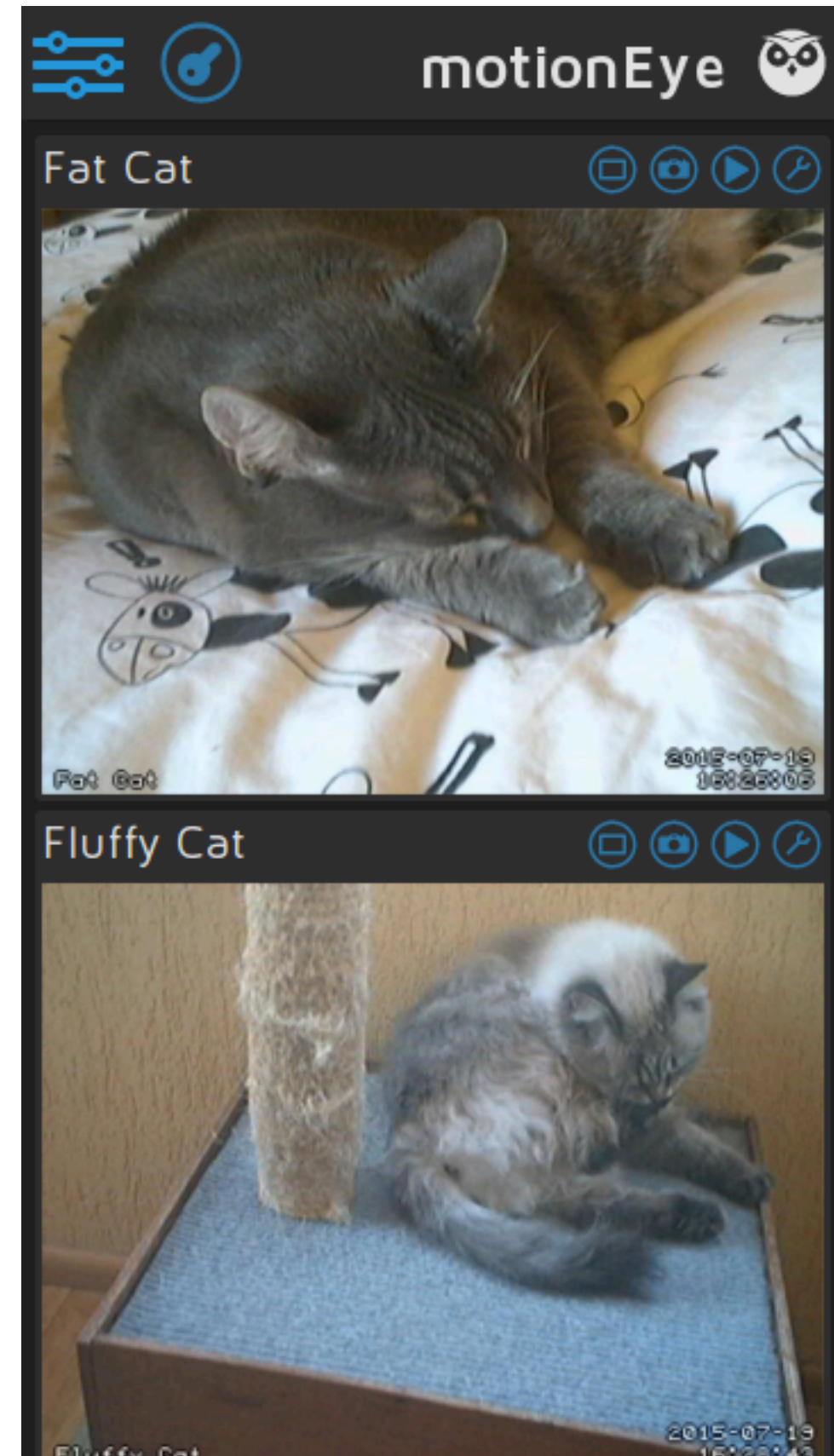
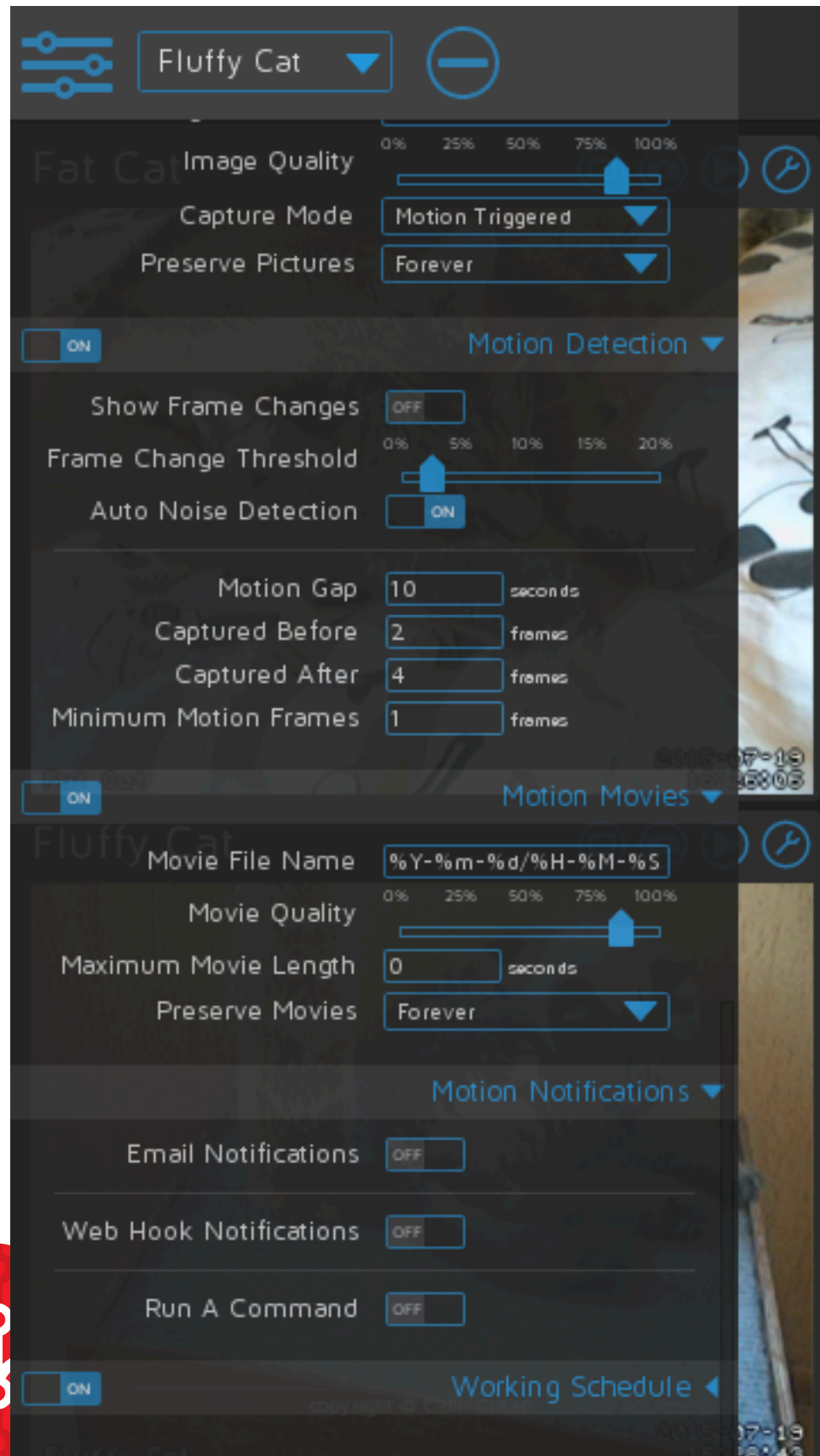
2019-11-28 17:42:46

Reception

2019-11-28 17:42:46

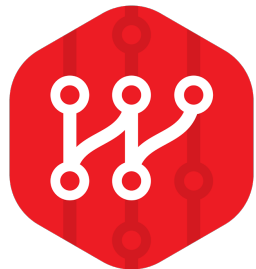
copyright © Calin Crisan 2013

Mobile view



Cameras

- Serial Camera
- USB
- Network



Versions

- **motionEyeOS**: ready-to-use
 - <https://github.com/ccrisan/motioneyeos>
- **motionEye**: over an existing system
 - <https://github.com/ccrisan/motioneye>



motionEyeOS

- Ready to use solution
- Includes the OS and motionEye
- Not appropriate for other works



motionEyeOS

- Download image: <https://goo.gl/AOZCYK>
- Copy image to the SD card:
 - Windows: <https://goo.gl/YjeqDo>
 - Linux/OSX: <https://goo.gl/i2IRyz>
- Insert the card on the RPI
- Default account: admin (no password)



- Set a password for Admin and Surveillance accounts
- Set your Time Zone
- Apply and reboot

General Settings ▼

Advanced Settings	<input type="checkbox"/> ON
Admin Username	admin
Admin Password	•••••
Surveillance Username	user
Surveillance Password	•••••
Time Zone	Europe/Brussels ▼
Hostname	<input type="text"/> ?

Current Version	20160915
Software Update	<button>Check</button>
Power	<button>Shut Down</button>
	<button>Reboot</button>

Configuration	<button>Backup</button>
	<button>Restore</button>



- Software update
- Shut Down
- Reboot

General Settings ▼

Advanced Settings

☐ ON

Admin Username

admin

Admin Password

••••••

Surveillance Username

user

Surveillance Password

••••••

Time Zone

Europe/Brussels ▼

Hostname

?

Current Version

20160915

Software Update

Check

Power

Shut Down

Reboot

Configuration

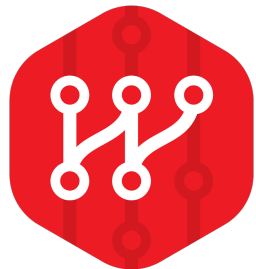
Backup

Restore



motionEye

- Package to be installed over an existing OS
- Includes motionEye
- Appropriate for other works



motionEye

- Download image: <https://goo.gl/AOZCYK>
- Copy image to the SD card:
 - Windows: <https://goo.gl/YjeqDo>
 - Linux/OSX: <https://goo.gl/i2IRyz>
- Insert the card on the RPI
- Default account: admin (no password)



module

- Add the module “bcm2835-v4l2”

```
$ cd /etc
```

```
$ sudo vi modules
```

```
...
```

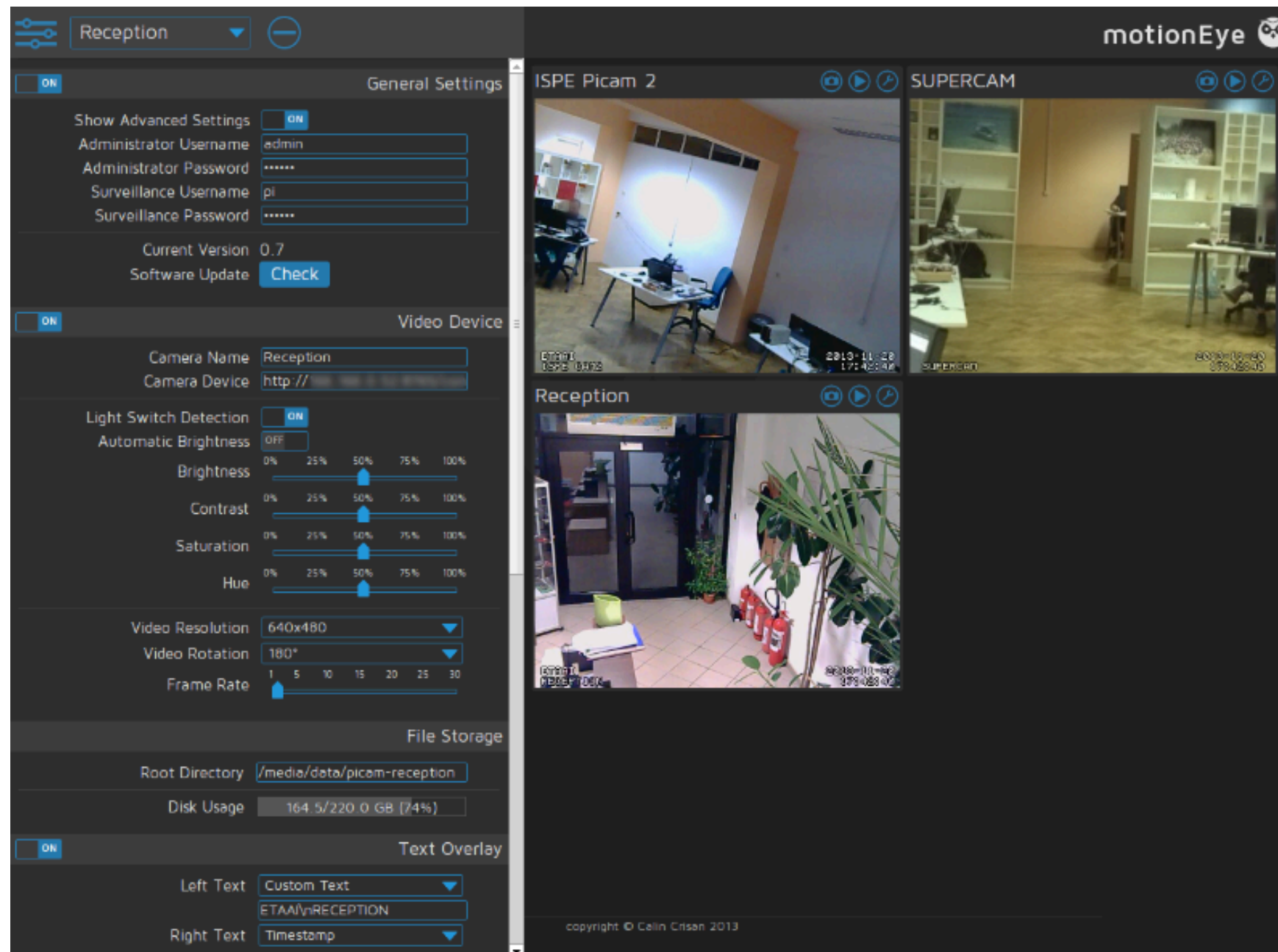
```
bcm2835-v4l2
```

```
...
```

```
$ sudo reboot
```



- Open the app:
- `http://<your host>:8765`



The screenshot displays the motionEye web interface, which is divided into two main sections: a settings panel on the left and a live video feed area on the right.

Settings Panel (Left):

- Reception** (selected camera)
- General Settings:**
 - Show Advanced Settings: ☒
 - Administrator Username: admin
 - Administrator Password: *****
 - Surveillance Username: pi
 - Surveillance Password: *****
 - Current Version: 0.7
 - Software Update: [Check](#)
- Video Device:**
 - Camera Name: Reception
 - Camera Device: http://
 - Light Switch Detection: ☒
 - Automatic Brightness: ☐
 - Brightness: 0% to 100% slider (set at 50%)
 - Contrast: 0% to 100% slider (set at 50%)
 - Saturation: 0% to 100% slider (set at 50%)
 - Hue: 0% to 100% slider (set at 50%)
 - Video Resolution: 640x480
 - Video Rotation: 180°
 - Frame Rate: 1 to 30 (set at 15)
- File Storage:**
 - Root Directory: /media/data/picom-reception
 - Disk Usage: 164.5/220.0 GB (74%)
- Text Overlay:**
 - Left Text: Custom Text
 - Right Text: Timestamp

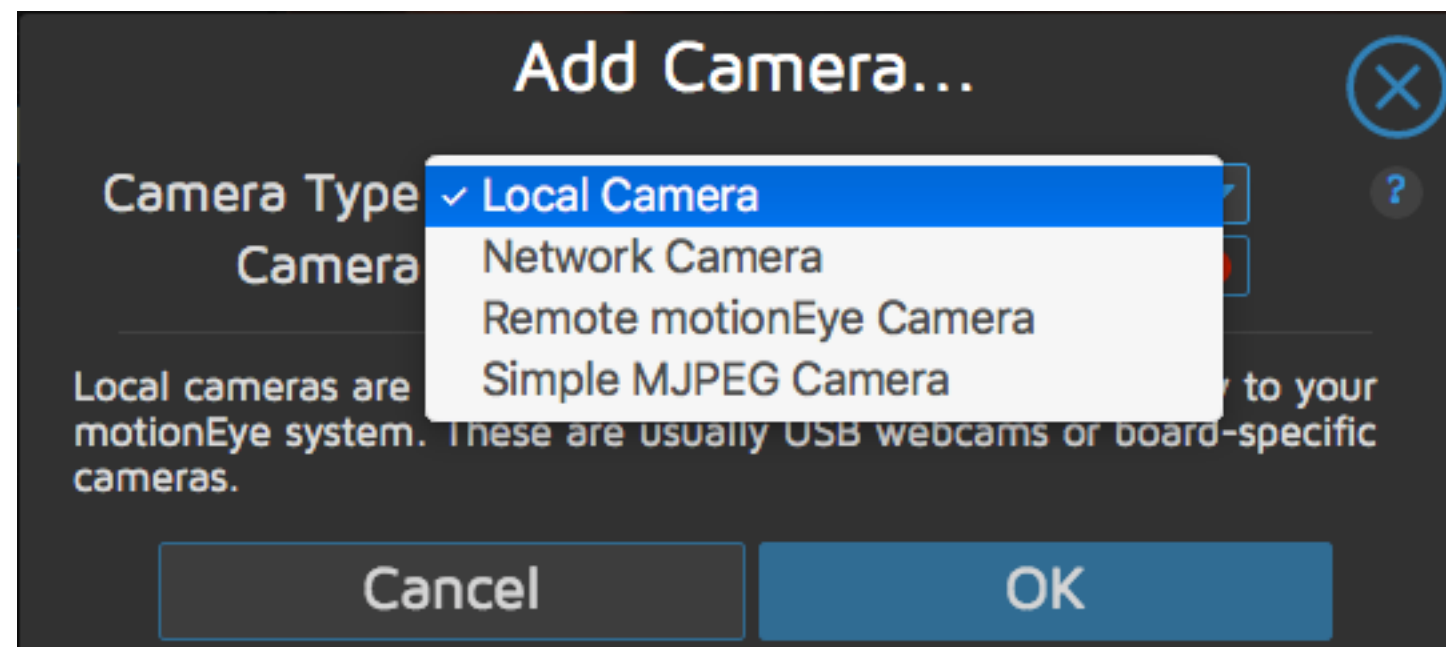
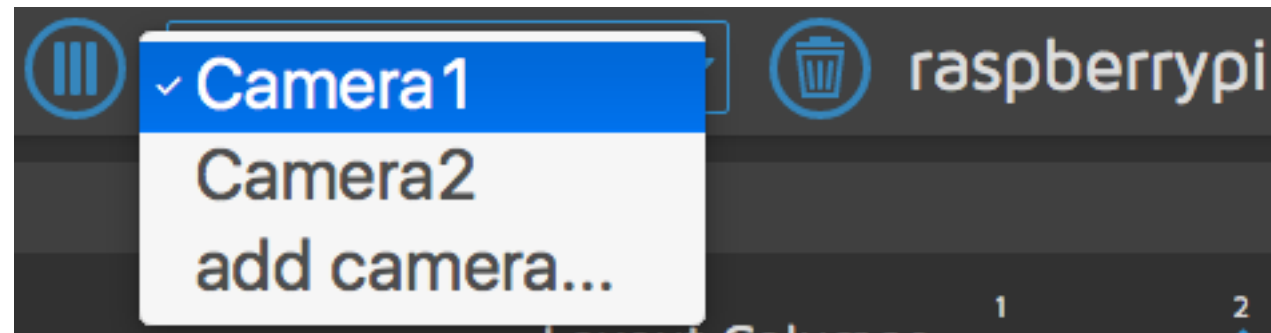
Live Video Feed Area (Right):

- motionEye** logo in the top right corner.
- ISPE Picam 2:** A live feed showing a room with a desk, a chair, and a large screen.
- SUPERCAM:** A live feed showing a room with a desk, a chair, and a large screen.
- Reception:** A live feed showing a reception area with a desk, a chair, and a large screen.

At the bottom of the interface, there is a copyright notice: "copyright © Colin Crisp 2013".



- Add a camera



- Open the settings:



- Set a password for Admin and Surveillance accounts

General Settings ▼

Advanced Settings ☒ ON

Admin Username

Admin Password

Surveillance Username

Surveillance Password

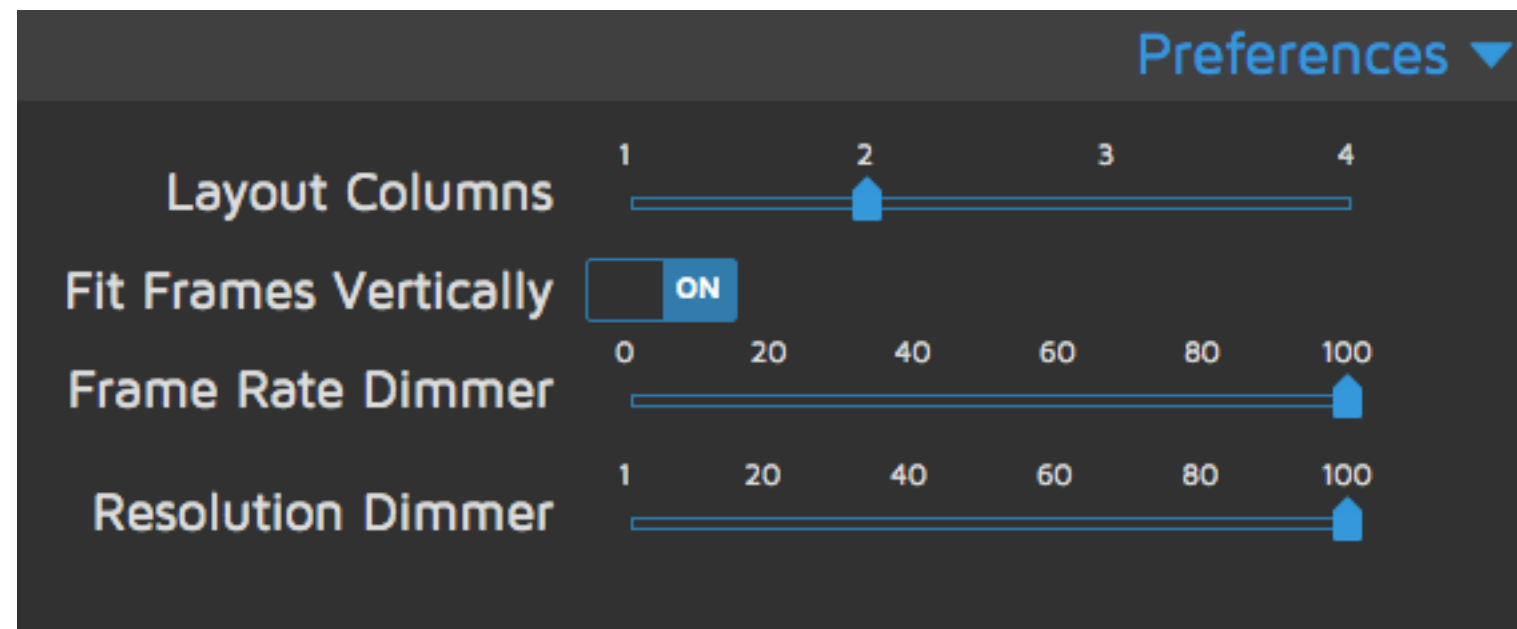
Current Version 0.33.4

Configuration

[?](#)



- Change the layout



- Settings
 - Change password
 - Backup and Restore configuration settings
 - Version of the application
 - Advanced settings (text overlay, motion detection, file storage)

General Settings ▼

Advanced Settings ☒ ON

Admin Username

Admin Password

Surveillance Username

Surveillance Password

Current Version 0.33.4

Configuration



- Video settings (On/Off) - Selected Camera
 - Device information
 - Image settings (contrast, saturation, brightness)
 - Resolution et Rotation
 - Frame rate

☐ ON Video Device ▼

Camera Name

Camera1

Camera Device

/dev/video0

Camera Type

V4L2 Camera

Automatic Brightness

OFF

Brightness

0% 25% 50% 75% 100%

Contrast

0% 25% 50% 75% 100%

Saturation

0% 25% 50% 75% 100%

Video Resolution

640x480 ▼

Video Rotation

0° ▼

Frame Rate

2 5 10 15 20 25 30

Extra Motion Options



- File Storage - Selected Camera
 - Location and disk usage
 - Upload service (Google or Dropbox)
 - Web hook
 - Command

File Storage ▼

Storage Device

Custom Path ▼

Root Directory

/var/lib/motioneye/Camera1

Disk Usage

4.2/14.6 GB (28%)

Upload Media Files

☒ ON ?

Upload Pictures

☒ ON

Upload Movies

☒ ON

Upload Service

Dropbox ▼

Location

/motioneye

Include Subfolders

☒ ON

Authorization Key

Obtain Key

Test Service

Call A Web Hook

☒ ON

Web Hook URL

e.g. http://example.com/notify/ !

HTTP Method

GET ▼

Run A Command

☒ ON

Command

command... !



- Text Overlay (On/Off) - Selected Camera
- Text to display on the camera

☐ ON

Text Overlay ▼

Left Text

Camera Name ▼

Right Text

Timestamp ▼



- Video Streaming (On/Off) - Selected Camera
 - Image quality
 - Authentication Mode (Disable, Basic, Digest)
 - Basic and Digest require “Surveillance Username”
 - URLs: snapshot, streaming, embed (iFrame)

☐ ON Video Streaming ▼

Streaming Frame Rate

1 5 10 15 20 25 30

Streaming Quality

0% 25% 50% 75% 100%

Streaming Image Resizing

☐ ON

0% 25% 50% 75% 100%

Streaming Resolution

0% 25% 50% 75% 100%

Streaming Port

8081

Authentication Mode

Digest ▼

?

Motion Optimization

OFF

Snapshot URL

http://192.168.1.50:8765/picture/1/

Streaming URL

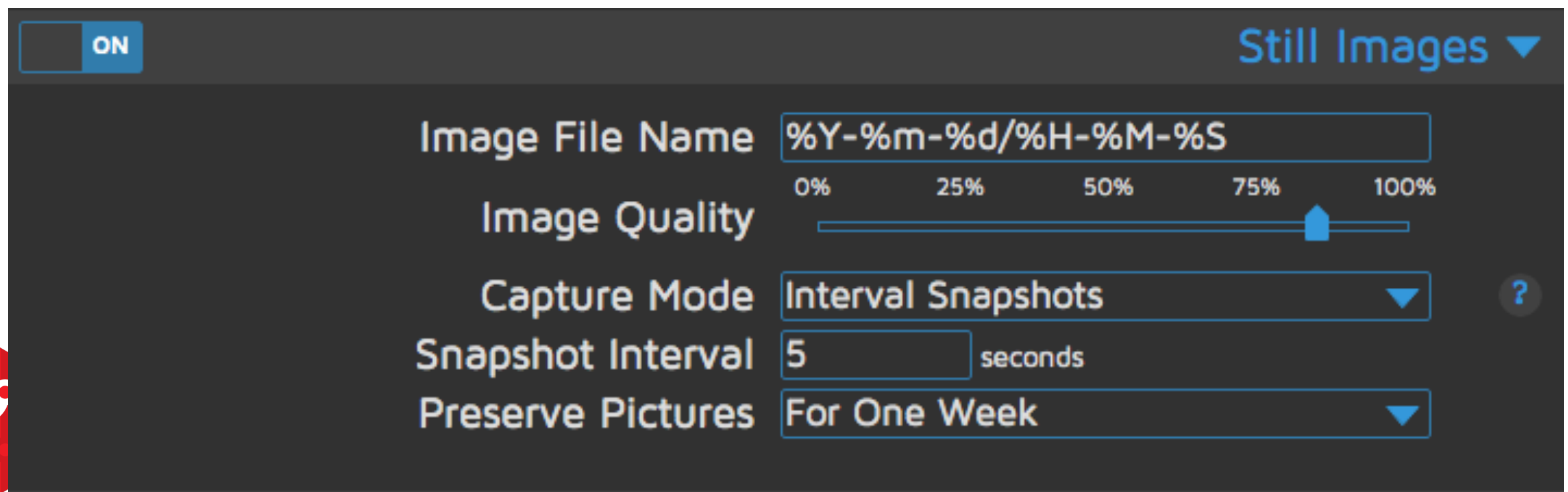
http://192.168.1.50:8081

Embed URL

http://192.168.1.50:8765/picture/1/



- Still Images (On/Off) - Selected Camera
 - Image quality
 - Name convention: file and directory
 - Capture mode:
 - motion triggered
 - Interval Snapshots (in seconds)
 - All Frames
 - Preserve files:
 - day, week, month, year, always or custom

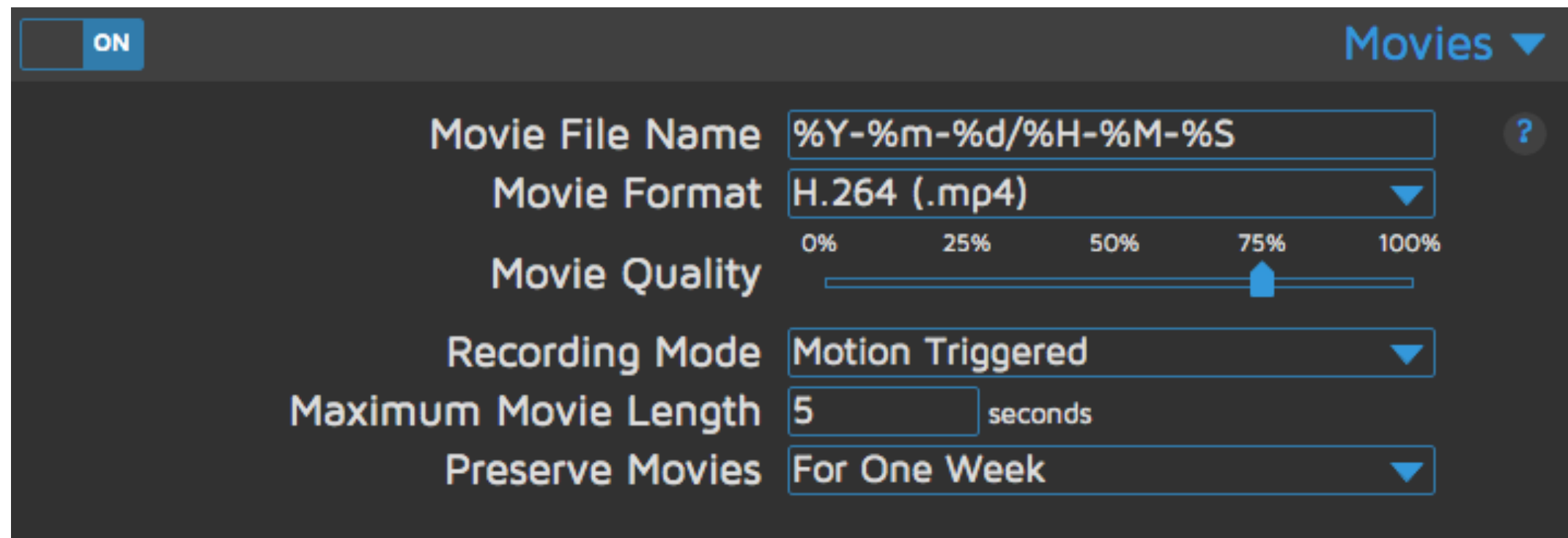


The screenshot shows a camera settings menu for 'Still Images'. At the top left is a toggle switch labeled 'ON'. The title 'Still Images' is at the top right with a dropdown arrow. Below are five settings:

Setting	Value
Image File Name	%Y-%m-%d/%H-%M-%S
Image Quality	Slider set to approximately 85% (between 75% and 100%)
Capture Mode	Interval Snapshots
Snapshot Interval	5 seconds
Preserve Pictures	For One Week

A red hexagonal logo with white circuit-like patterns is visible in the bottom left corner.

- Movies (On/Off) - Selected Camera
 - Movie quality
 - Name convention: file and directory
 - Format: mkv, avi, mp4, ogg, etc.
 - Recording mode:
 - motion triggered
 - continuous recording
 - Maximum movie length (in seconds)
 - Preserve files:
 - day, week, month, year, always or custom



The screenshot shows a camera's settings menu for movies. At the top left, there is a toggle switch labeled 'ON'. At the top right, the word 'Movies' is displayed with a downward arrow. The settings are as follows:

Setting	Value
Movie File Name	%Y-%m-%d/%H-%M-%S
Movie Format	H.264 (.mp4)
Movie Quality	75%
Recording Mode	Motion Triggered
Maximum Movie Length	5 seconds
Preserve Movies	For One Week

A red octagonal icon with a white circuit-like pattern is located in the bottom left corner of the image.

- Motion Detection (On/Off) - Selected Camera
 - Frame settings (changes, sensitivity, noise detection, change detection, etc)
 - Motion Gap (in seconds) is the number of seconds in silence
 - Number of frames to capture before and after the detection
 - Number of frames required to start the capture

☒ ON Motion Detection ▼

Show Frame Changes ☒ ON

Frame Change Threshold

0% 5% 10% 15% 20%

Auto Noise Detection ☒ ON

Light Switch Detection

0% 25% 50% 75% 100%

Motion Gap seconds

Captured Before frames

Captured After frames

Minimum Motion Frames frames




- Motion Notifications - Selected Camera
 - Action to perform when a detection occurred (send an email, call a web hook, run a specific command)

Motion Notifications ▼


Send An Email

☒ ON


Email Addresses

email addresses... 

SMTP Server

e.g. smtp.gmail.com 

SMTP Port

e.g. 587 

SMTP Account

account@gmail.com...

SMTP Password

From Address

email address...

Use TLS

☐ OFF

Attached Pictures Time Span


0 seconds

Test Email

Call A Web Hook

☒ ON

Web Hook URL

e.g. http://example.com/notify/ 


HTTP Method

GET ▼

Run A Command

☒ ON

Command

command... 



- Working Schedule (On/Off) - Selected Camera
- Plan the motion detection

☐ ON

Working Schedule ▼

Monday	<input type="checkbox"/> ON	from	08:00	to	17:30
Tuesday	<input type="checkbox"/> ON	from	08:00	to	17:30
Wednesday	<input type="checkbox"/> ON	from	08:00	to	17:30
Thursday	<input type="checkbox"/> ON	from	08:00	to	17:30
Friday	<input type="checkbox"/> ON	from	08:00	to	17:30
Saturday	<input type="checkbox"/> ON	from	00:00	to	00:01
Sunday	<input type="checkbox"/> ON	from	00:00	to	00:01

Detect Motion

Outside Working Schedule ▼

?



Considerations

- Play with it!
- Customize parameters according:
 - your camera
 - your environment (inside, outside, lights)
- Ask support of some thieves

Q/A

