Picture Streamer

User's Guide

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Installation

On Raspberry Pi with Raspbian

Install Raspbian as usually. If you are new to the Raspberry Pi, checkout the great introduction to the Raspberry Pi you'll find on: https://www.raspberrypi.org/help/quick-start-guide/

Now you should be logged in a terminal session on your Raspberry Pi as user “pi”.

Set up your your Wi-Fi connection

You have to replace the original “ifupdown” script of Ifplugd with the once from WPA-Supplifcant. So the Wi-Fi will autocratically reconnect if the connection gets lost:

```
cd /etc/ifplugd/action.d/
mv ifupdown ifupdown.orginal
cp /etc/wpa_supplicant/ifupdown.sh ./ifupdown
```

Add your Wi-Fi networks to to the WPA-Supplifcant configuration:

```
nano /etc/wpa_supplicant/wpa_supplicant.conf
```

An example configuration could look like this:

```
network={
    priority=9
    ssid="MyMobileWifi"
    psk="MySecretPas$word"
}

network={
    priority=3
    ssid="MyWirelessHomeNetwork"
    psk="MyOtherSecretPas$word"
}
```

If you want to get more information about Wi-Fi access points at your position, I recommend to use Wavemon:

```
apt-get install wavemon
...
wavemon
```

Install dependencies

Enter the following commands to install all the dependencies for the Picture Streamer:

```
sudo aptitude install python-avahi python-imaging \
                      python-pip python-dev libgphoto2-2-dev
...
sudo pip install gphoto2
...
```

Install the Picture Streamer Application

Extract all files to “/opt/PictureStreamer/” and make set the access rights:

```
sudo tar -xzf picture_streamer.tar.gz /opt/
sudo chmod -R 777 /opt/PictureStreamer
```

Test the Application by running the script:

```
cd /opt/PictureStreamer
./picture-streamer-on-Raspberry-Pi
```

Now the service should be published via Bonjour and the Web-Interface should be available on port 8888 of your Raspberry Pi. For example, if the IP address of your Pi is “192.168.1.16”, you open the web interface by typing “http://192.168.1.16:8888/” into the address bar of your web browser.

If everything works fine you can configure it to run on start-up:

```
nano /etc/rc.local
```

```
#!/bin/sh -e
#
# rc.local
#
# This script is executed at the end of each multiuser runlevel.
# Make sure that the script will "exit 0" on success or any other
# value on error.
#
# In order to enable or disable this script just change the execution
# bits.
#
# By default this script does nothing.

# Mount Picture Streamer file system
# (uncomment the following line, if you have your
# Picture Streamer installed on an USB Stick):
#mount -t vfat -o defaults,umask=000 /dev/sda1 /opt/PictureStreamer/

# Start Picture Streamer
USER="pi"
```

```
if [ $? -eq 0 ]; then
    echo "Mounted Picture Streamer file system"
    echo "Starting Picture Streamer ..."
    cd /opt/PictureStreamer
    sudo -u "$USER" ./picture-streamer-on-Raspberry-Pi
else
    echo "ERROR: Could not mount Picture Streamer file system"
fi

exit 0
```

On a notebook with Ubuntu

Install dependencies

Enter the following commands to install all the dependencies for the Picture Streamer:

```
sudo apt-get install python-avahi python-imaging python-pip \
                     python-dev libgphoto2-dev
...
sudo pip install gphoto2
…
```

Install the Picture Streamer Application

Extract the Picture Streamer to a directory of your choice. Open a terminal and go into that directory. For example you have the Picture Streamer directory directly within your home folder:

```
cd ~/PictureStreamer
```

Run your picture streamer by typing:

```
bash picture-streamer-on-Ubuntu
```

Now the service should be published via Bonjour and the Web-Interface should be available on port 8888 of your Raspberry Pi. For example, if the IP address of your Pi is “192.168.1.16”, you open the web interface by typing “http://192.168.1.16:8888/” into the address bar of your web browser.