Yocto

eigene Embedded GNU/Linux Distro bauen

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FSFE Fellowship Gruppe Zürich

www.bitzgi.ch/presentation/

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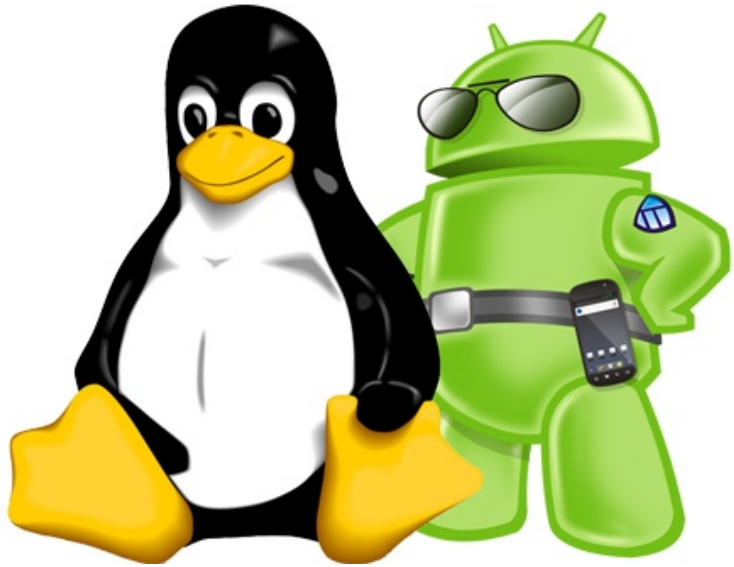
Motivation



If you can‘t hack it, you don‘t own it

Yocto

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- Linux Foundation

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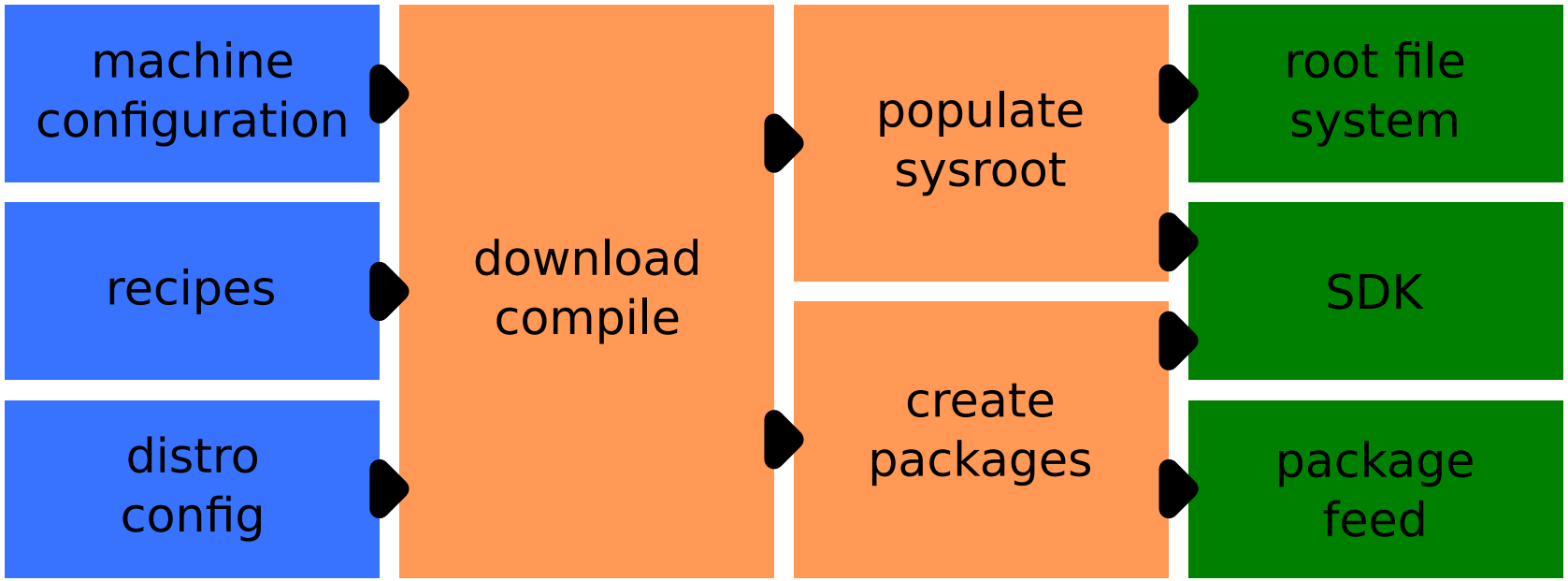
- AMD, LG Electronics, Renesas, Long Term Support Initiative (LTSI), Juniper Networks, O.S. Systems, Huawei, Mentor Graphics, Texas Instruments, Sakoman, Inc., OpenEmbedded eV, MontaVista Software, LSI Corporation, Intel Corporation, Freescale Semiconductor, Enea AB, Wind River Systems, Dell, Dynamic Devices, SDG Systems, Silica, GENIVI Alliance, Nefedia, Eukréa Electromatique, minnowboard.org, NetModule AG, Move Innovation, DENX Software Engineering, ChargeStorm AB, Qtechnology, KOAN, The Ångström Distribution, Sidebranch, Gumstix, Timesys, Tilera, Secret Lab Technologies, RidgeRun, NetLogic Microsystems, Panasonic, Mindspeed, Cavium Networks

Build Übersicht



Verzeichnisstruktur

bitbake

build

meta

meta-openembedded

meta-raspberrypi

meta-urs

meta-yocto

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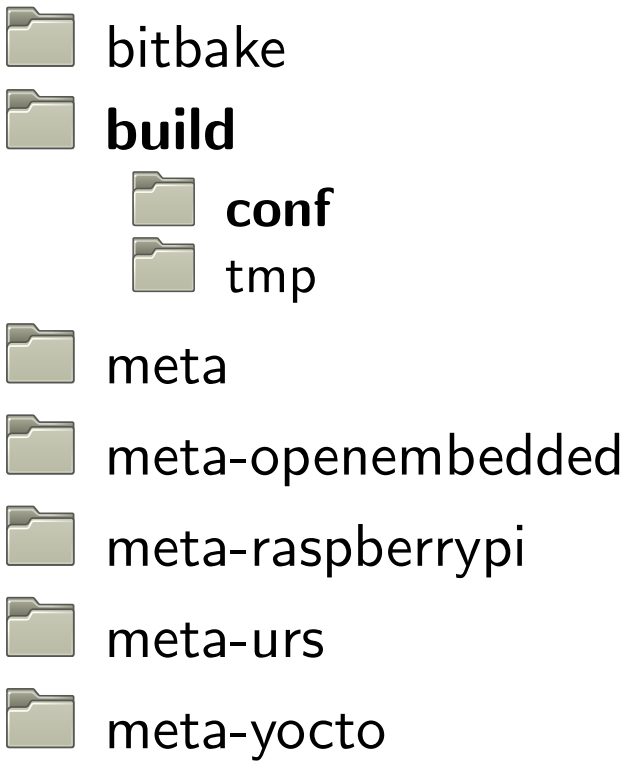

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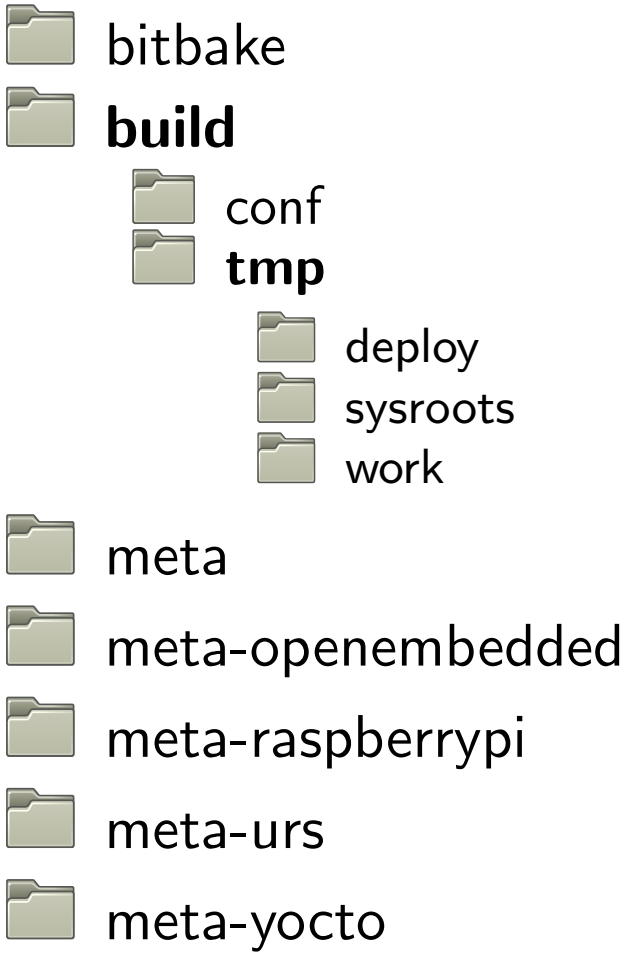

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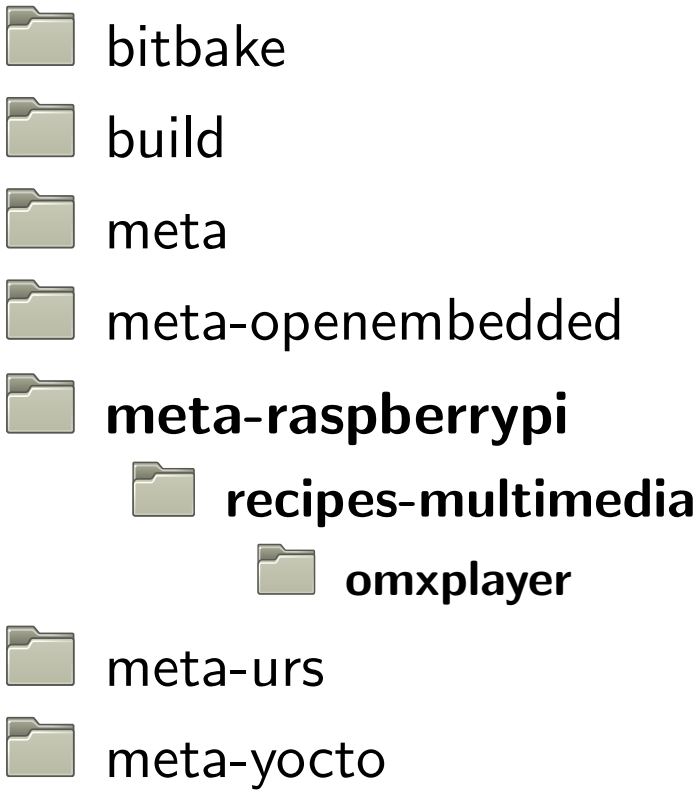

Rezepte

```
1  SUMMARY = "A commandline OMX player for the Raspberry Pi"
2  LICENSE = "GPLv2"
3
4  DEPENDS = "libpcre libav virtual/egl boost freetype dbus"
5  RDEPENDS_${PN} += "bash procps"
6
7  SRCREV = "7af21f596378e5efeceebedff9c4a298e2d06d98"
8  SRC_URI = "git://github.com/popcornmix/omxplayer.git;protocol
9             file://0001-Remove-Makefile.include-which-includes
10
11 COMPATIBLE_MACHINE = "raspberrypi"
12
13 inherit autotools
14
15 do_install() { ... }
16
17 FILES_${PN} = "${bindir}/omxplayer* \
18                ${libdir}/omxplayer/lib*${SOLIBS}
19 ...
```

Schnellstart

1. Yocto von yoctoproject.org herunterladen

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6. starte `bitbake rpi-basic-image`

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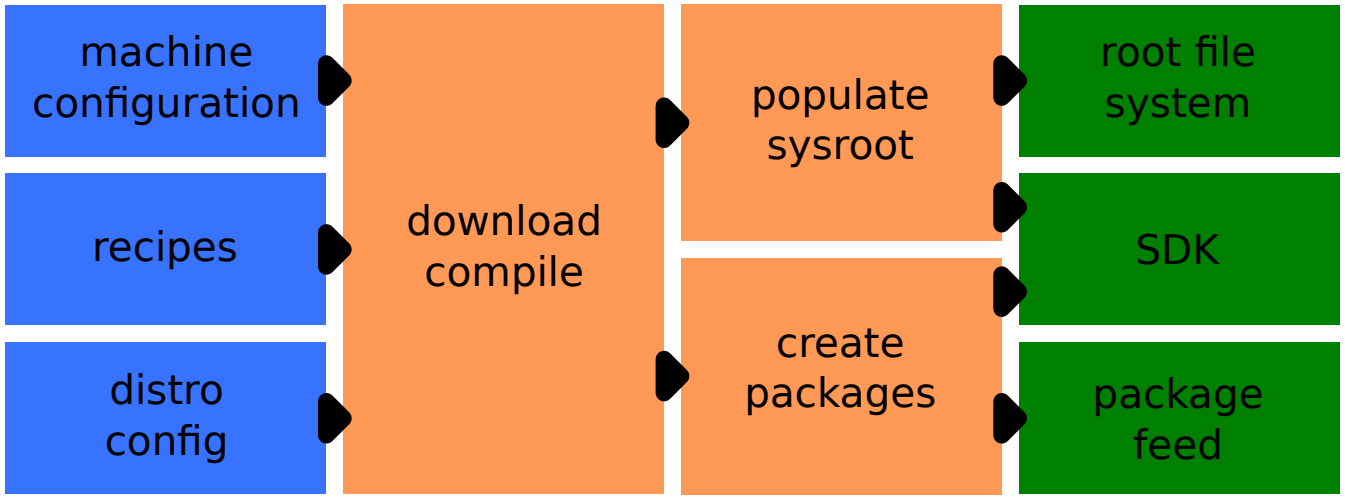
7. Kaffee trinken, Mittag essen, Wochenendausflug, ...

Entwicklertools



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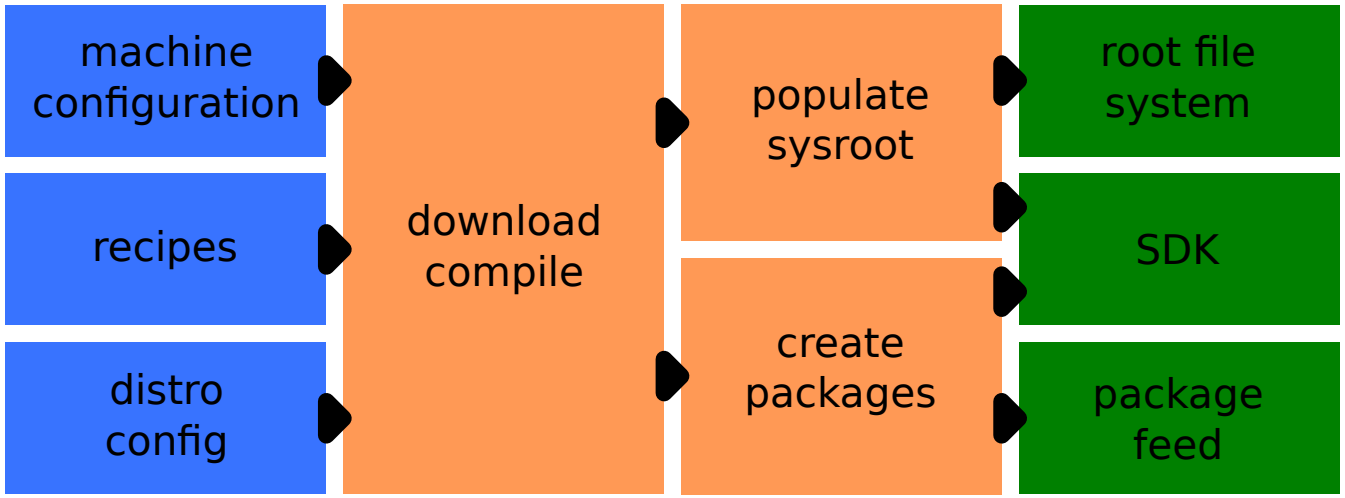
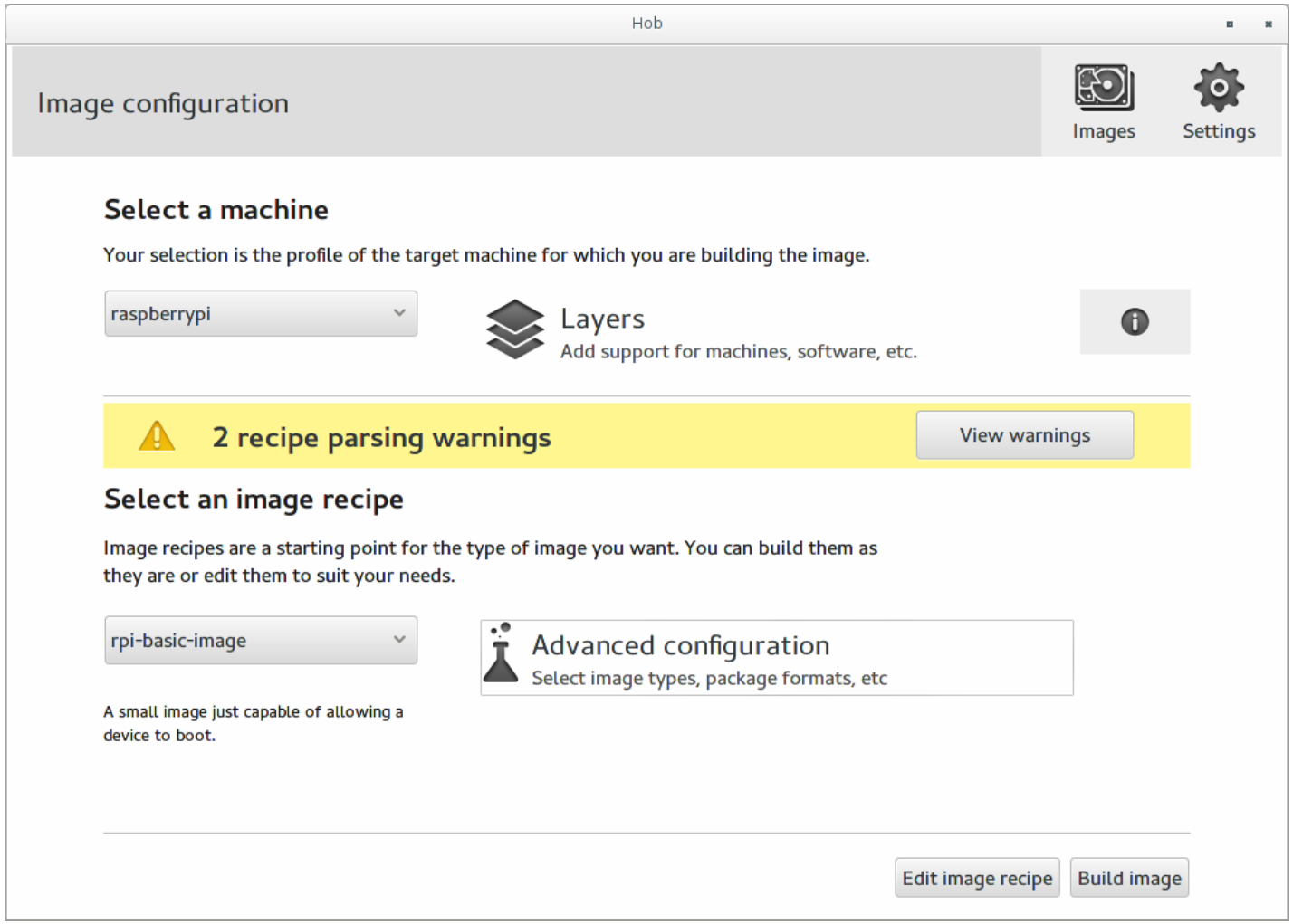


- `bitbake meta-toolchain-sdk` für Cross Compiler
- `bitbake <image> -c populate_sdk` für Cross Compiler mit Sysroot

Weiteres



- Hob

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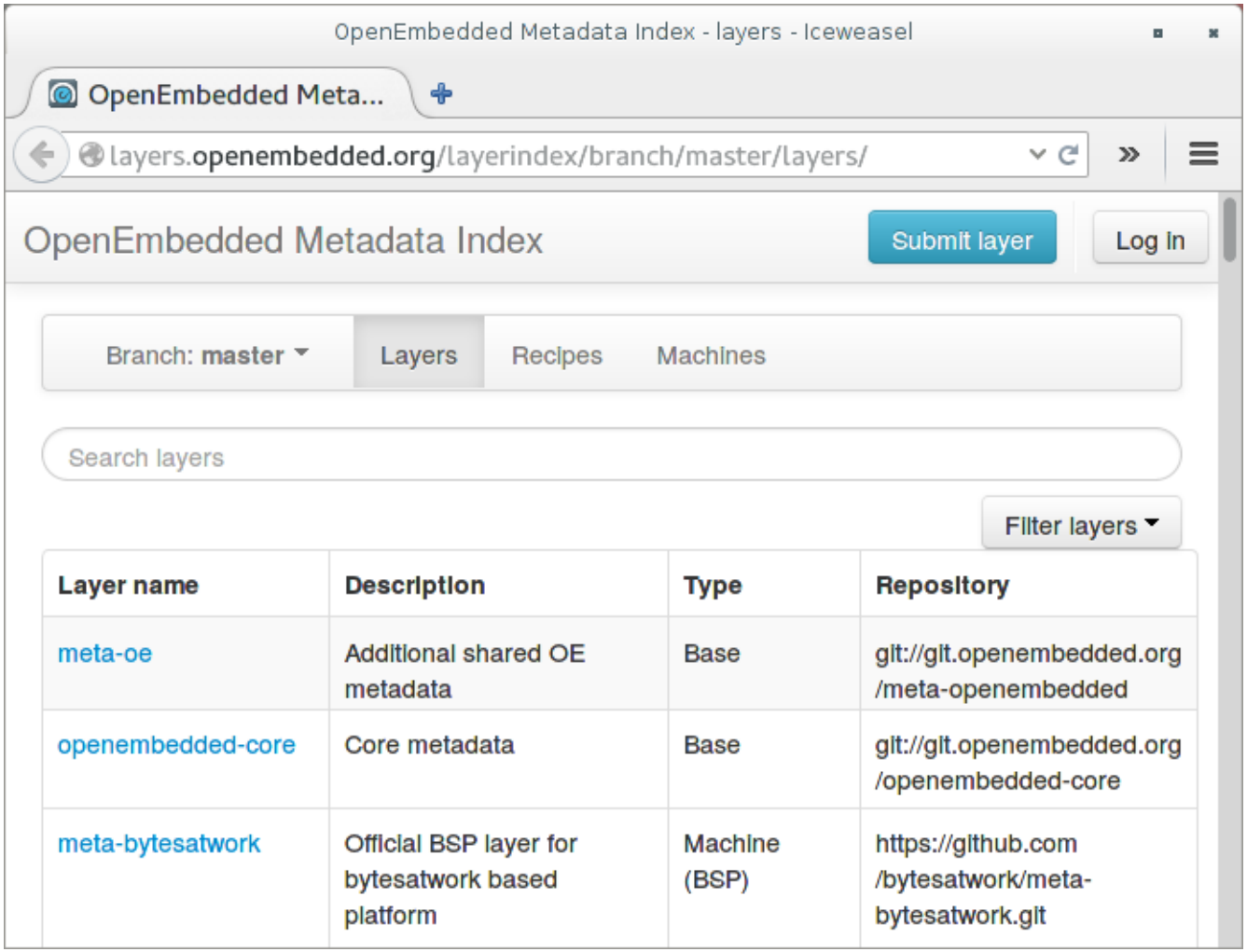

- Hob
- layers.openembedded.org

Fazit

- spezifische Embedded GNU/Linux Distro bauen
- SDK bauen

Fazit

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- selbst um Updates kümmern