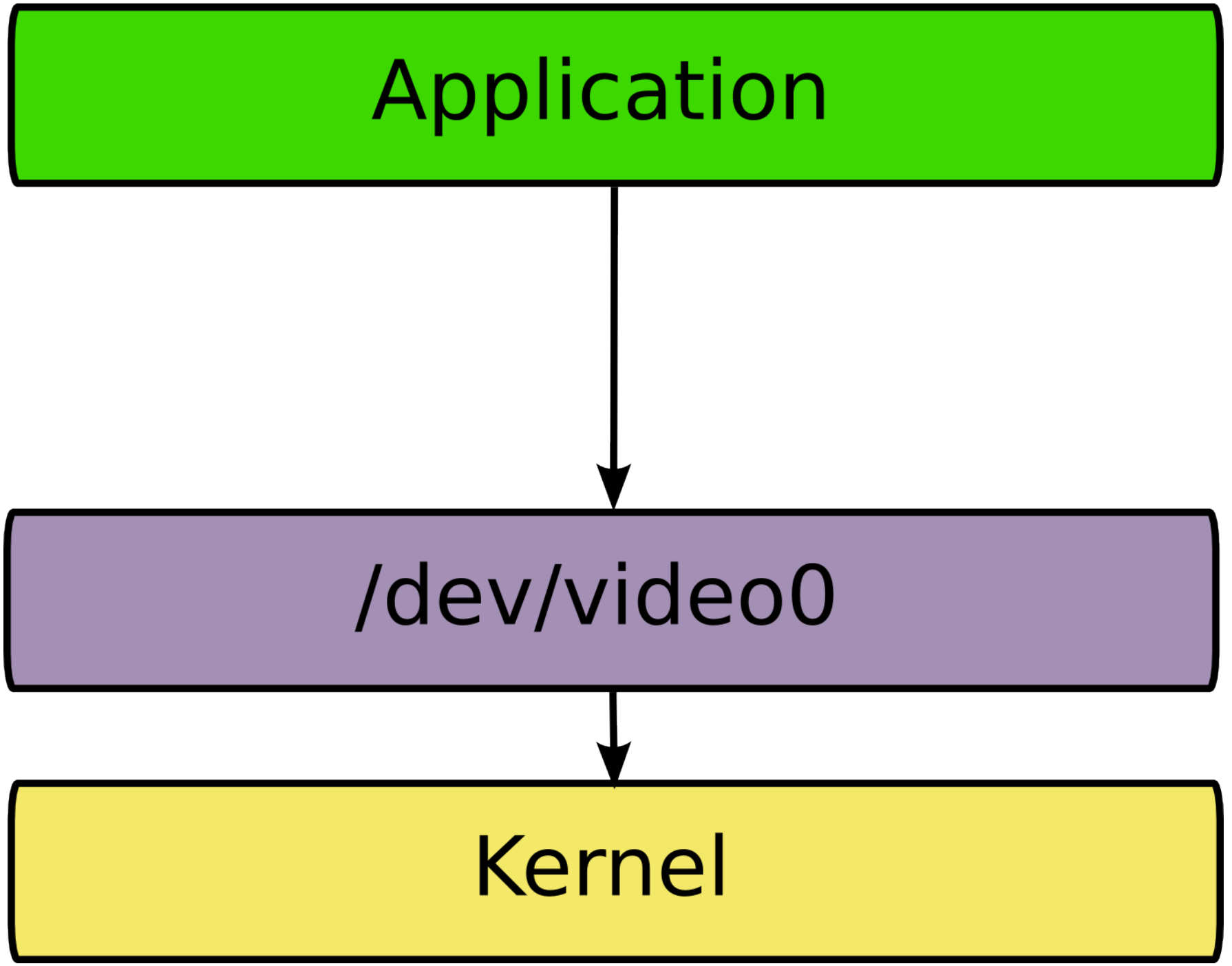
Video4Linux Userspace

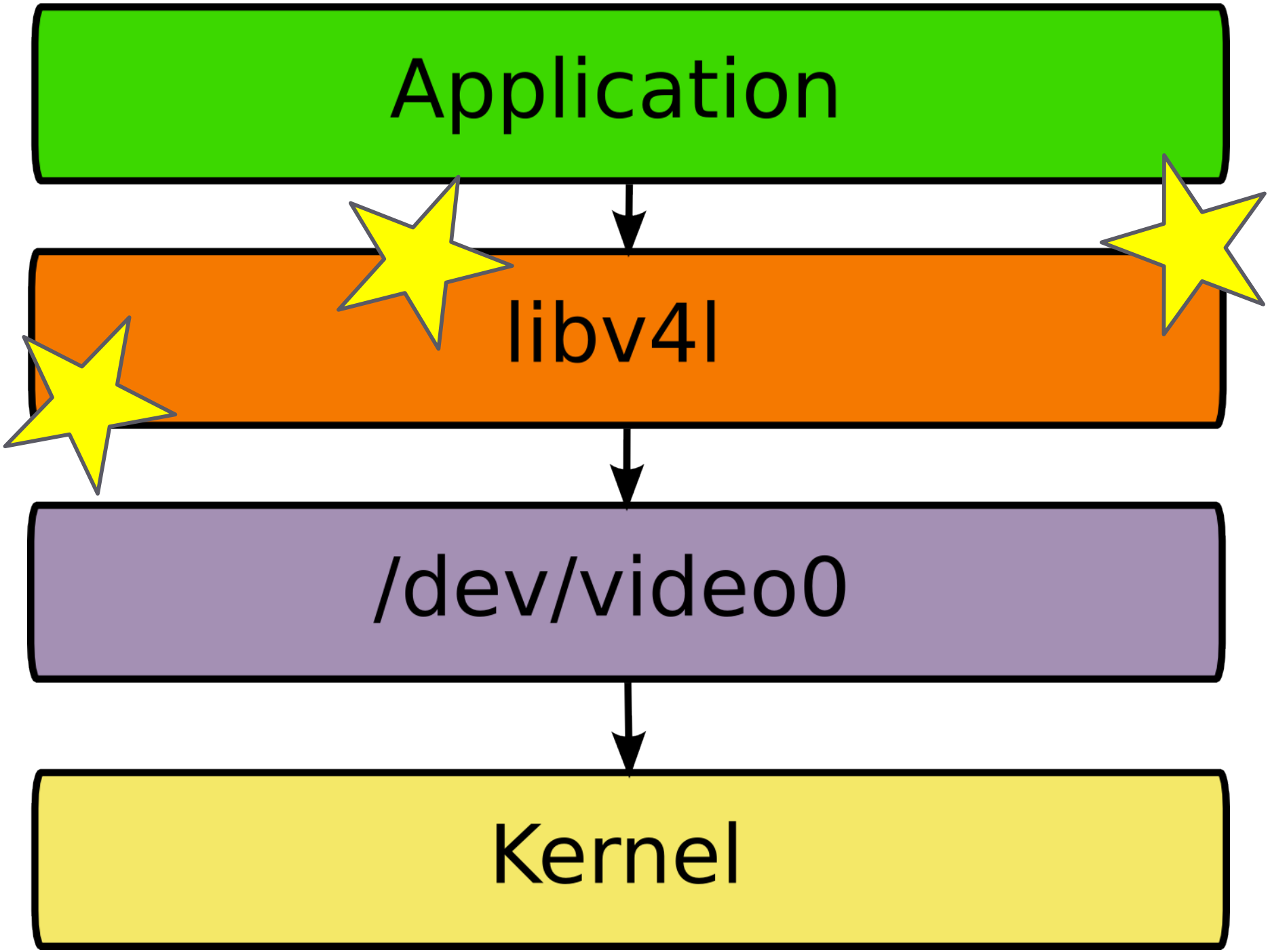
libraries and servers

Brandon Philips
SuSE Labs
bphilips@suse.de

Novell®

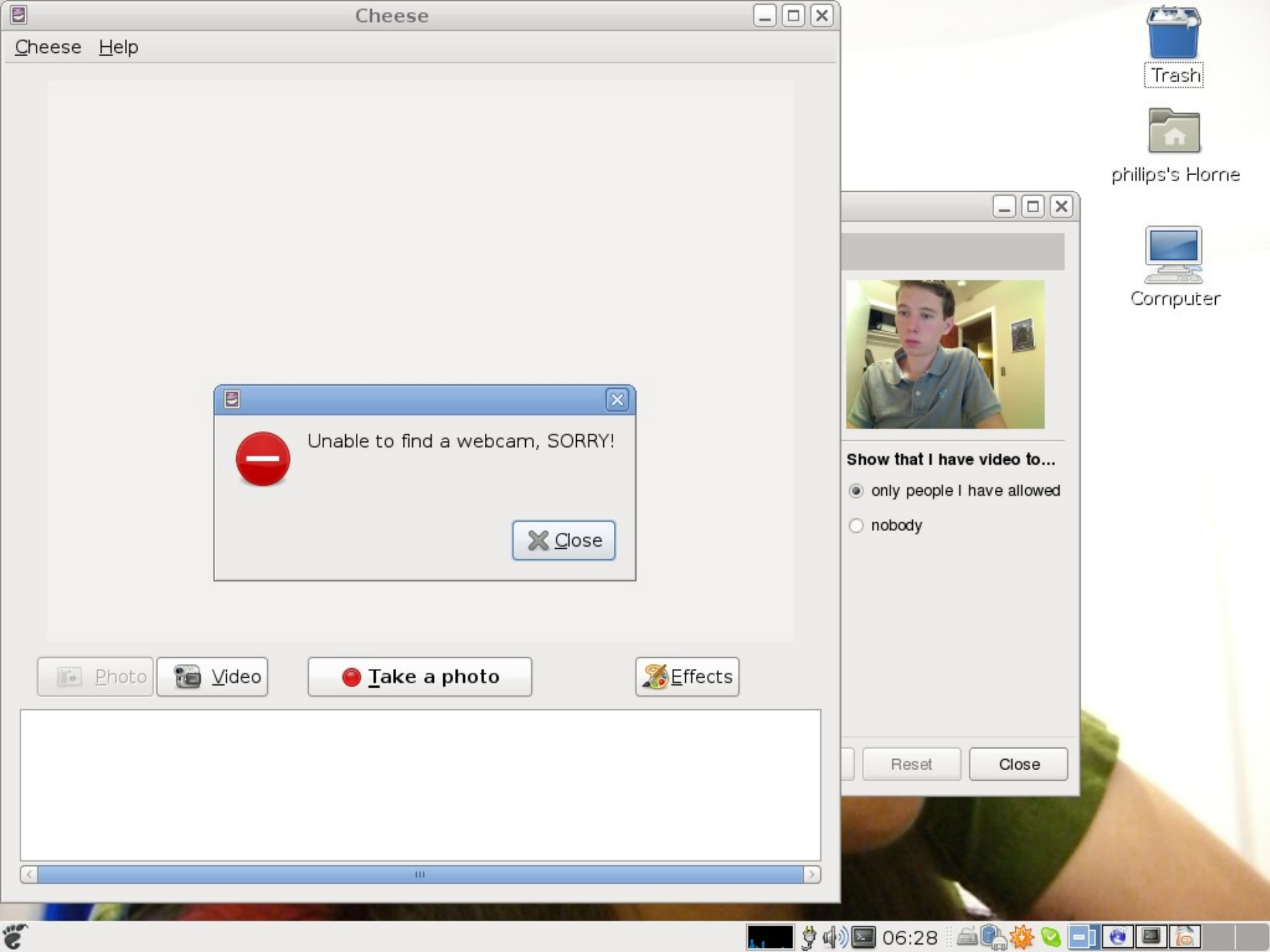
What is so great about libv4l?

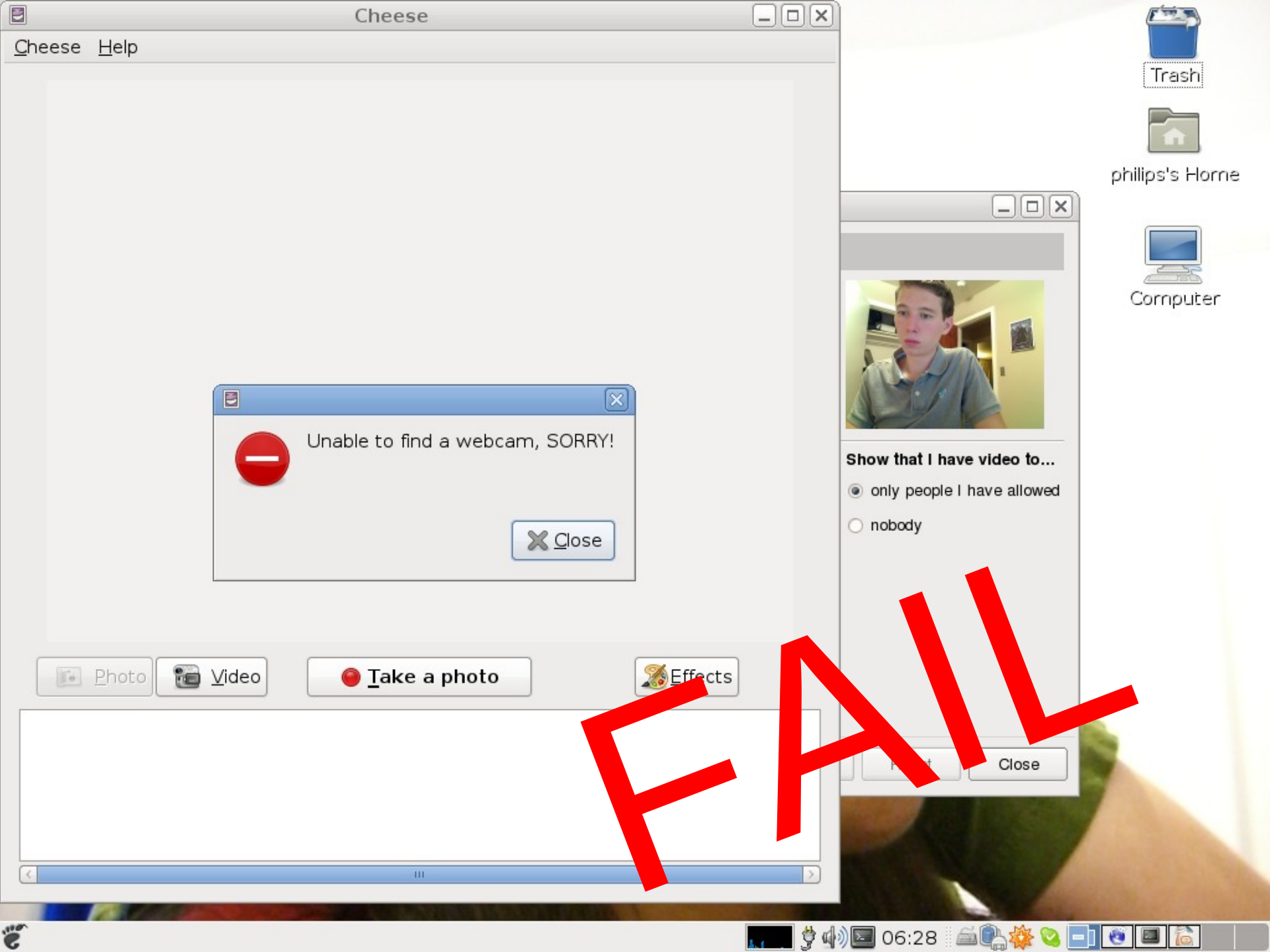

Application
/dev/video0
Kernel


Application
libv4l
/dev/video0
Kernel

Extending libv4l

Why do we need a video4linux server?

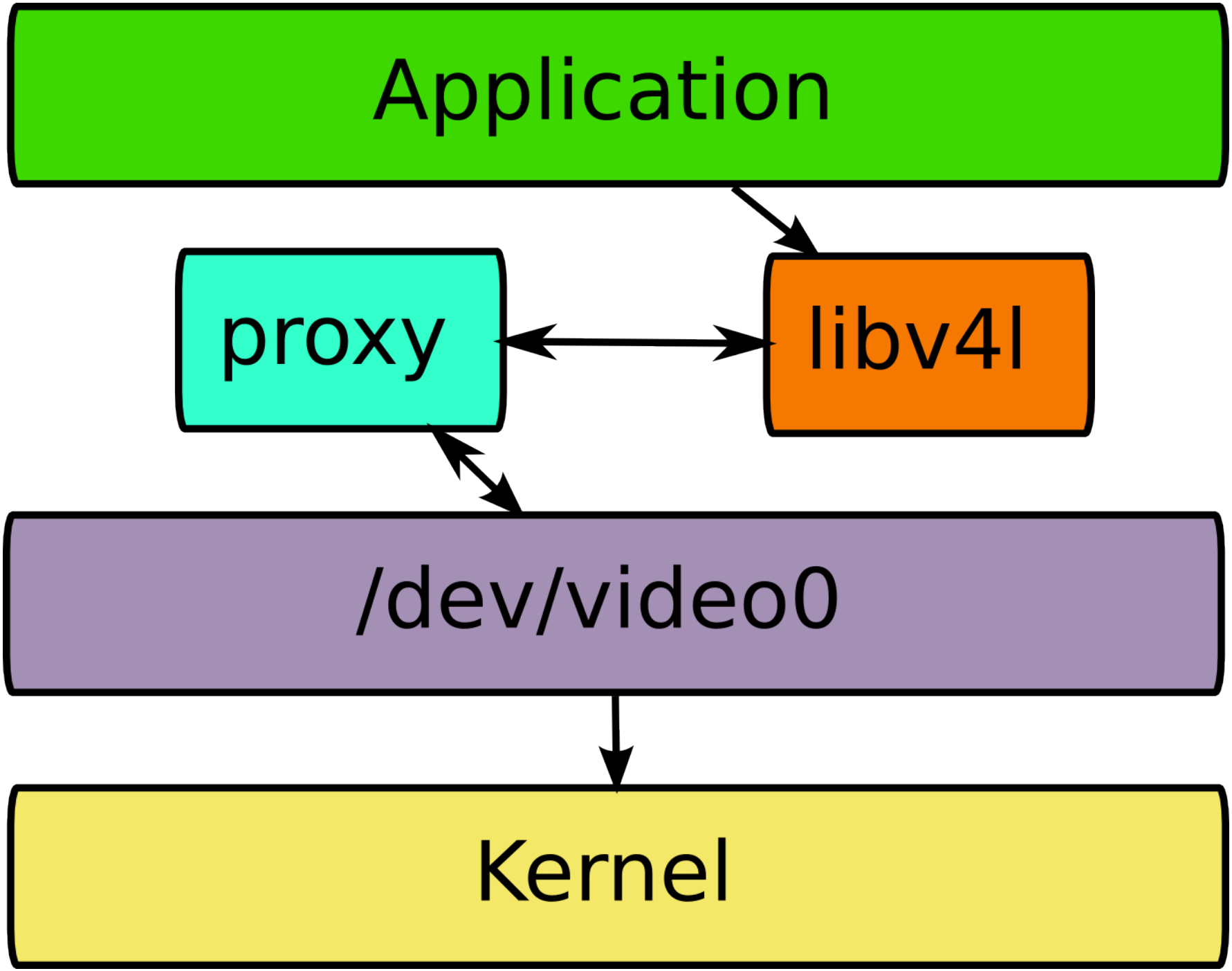

Cheese
Cheese Help
Unable to find a webcam, SORRY!
Close
Photo
Video
Take a photo
Effects
Trash
philips's Home
Computer
Show that I have video to...
only people I have allowed
nobody
Reset
Close
06:28


Cheese
Cheese Help
Unable to find a webcam, SORRY!
Close
Photo
Video
Take a photo
Effects
Show that I have video to...
only people I have allowed
nobody
Close
Trash
philips's Home
Computer
FAIL
06:28

Tripping points

-EBUSY for non-libv4l applications

How it will work


Application
proxy
libv4l
/dev/video0
Kernel

IOCTLs

- REQBUFS – ignored, server takes maximum buffers
- DQBUF – increase refcount
- QBUF – decrease refcount
- S_FMT – ignored, could do userspace magic
- Everything else passes through

Buffer management

Future directions