

# CONFERENCE RECORDING 2.0: BUILDING A BETTER SYSTEM

Joel Addison | [@joeladdison](#)

# WHO AM I?

- Software Systems and Aerospace Engineer
- Involved with open source software
- Interested in audio visual setups

# WHY AM I HERE?

- Enjoy volunteering at conferences
  - Pycon Australia 2014, 2015
  - Linux.Conf.Au 2015, 2016
- Helped extensively with AV
  - Training other volunteers
  - Setup venue, incl. software config
  - Wrote an encoding system

# WHAT I'LL EXPLORE TODAY

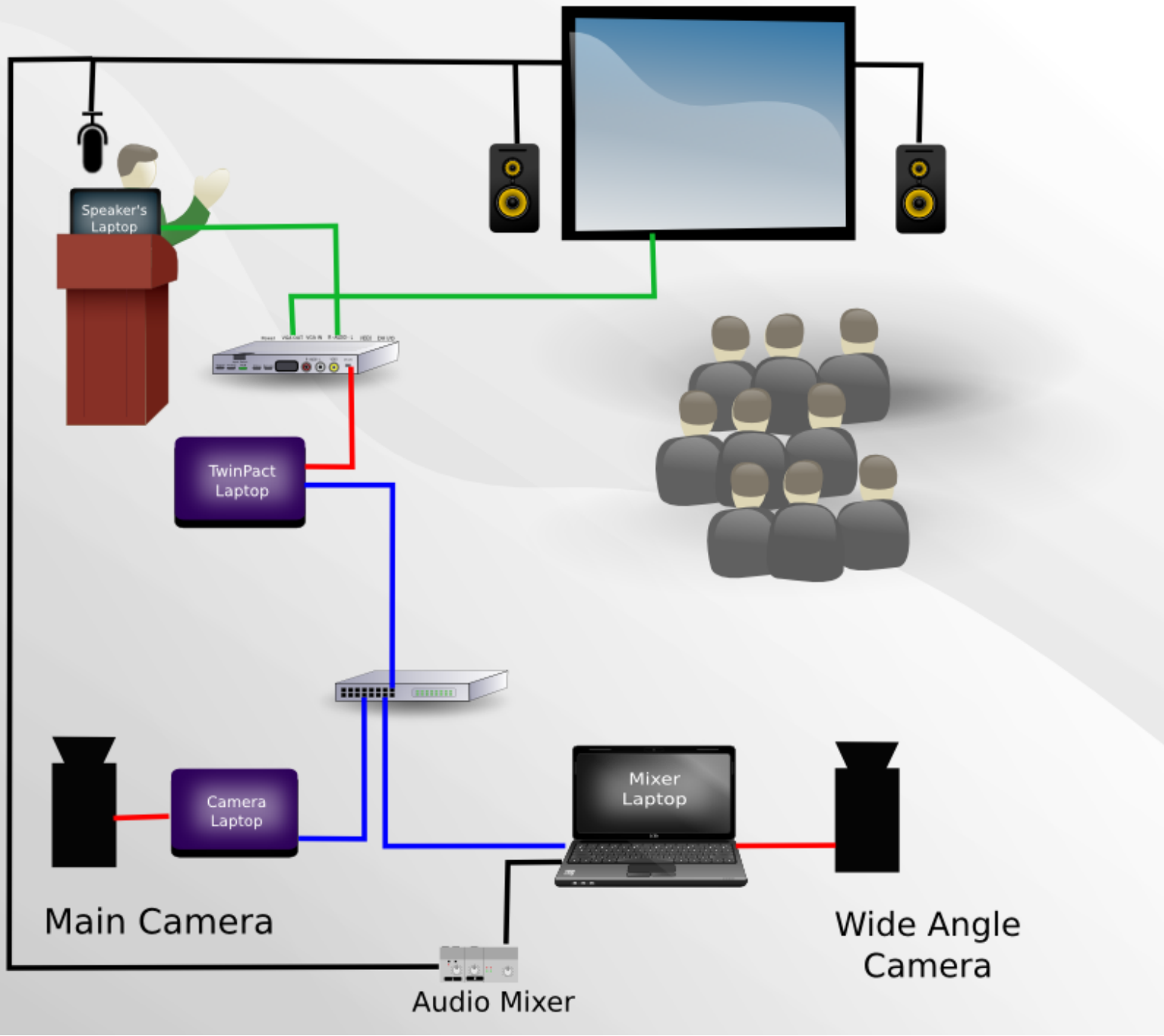
- AV setup at Linux Australia conferences
- New recording system
- How you can get involved

# PAST AV SETUP

Custom combination of hardware and software

Often thrown together at the last minute...

**HARDWARE**



# SOFTWARE

Based on Eventstreamr (thanks PLUG!)

- Configuration
  - Conference management
  - Station monitor
- Recording (dvswitch)
- Encoding (ffmpeg)



# WELL THAT ALL SOUNDS GOOD

Yep, it works pretty well.

But there are a few issues we keep encountering :(

# HARDWARE

- Twinpacts
  - only support VGA
  - Firewire output
- Laptops
  - getting pretty old

# SOFTWARE

dvswitch is used for mixing...  
which needs libav...  
not really supported anymore

**SO WHAT CAN WE DO?**

V 2.0

# **MAIN FOCUSES**

**SIMPLE**

**WELL DOCUMENTED**

**EXTENSIVE MONITORING**

# COMPONENTS

- Conference setup
- Recording, including mixing
- Encoding, including review
- Distribution

# RECORDING

- Hardware
  - HDMI / USB-C input
  - Numato Opsis
- Software
  - Voctomix by CCC Video Operation Center (C3VOC)



# ENCODING

- Simple to configure
- Support multiple output formats
- Well monitored
- Scalable

# DISTRIBUTION

- Automatically upload to selected places
  - YouTube
  - File mirrors
- Apply tagging and description

**DOCUMENT ALL THE THINGS!**

# DOCUMENTATION

Make it simple for someone to setup

Give tips for being an AV person in a room

**ENCODING**

# ENCODING SYSTEM

- Written just before (and during) Pycon Australia 2015
- Python backend, AngularJS frontend
- Scalable - just start another container!

# ENCODING PROCESS

1. Reviewer configures task and submits job
2. Encoding node accepts job
3. Raw input processed and videos output
4. Output sent to main file server

# REVIEWING TALKS

*demo*



# PROCESSING

1. Generate title and credit slides
2. Create pipeline with slides and videos
3. Encode to selected formats (eg. ogv, ogg)

# IMPLEMENTATION

- MoviePy
- ffmpeg

# STILL LOTS TO IMPROVE

- UI is very rough
- Video quality
- More review options
- Integrate with other conference systems

# HOW DO I GET INVOLVED?

## HARDWARE

TimVideos.us - <https://code.timvideos.us>

## SOFTWARE

Eventstreamr 2.0 -  
<https://github.com/joeladdison/eventstreamr>

Voctomix - <https://github.com/voc/voctomix>

**QUESTIONS?**

# THANKS :)

 Slides

<https://joeladdison.com/presentations/conference-recording-20>

 @joeladdison