

Producing Multi-Camera Events

for broadcast quality live streams

NABSHOW
Where Content Comes to Life



About the Instructor

- Began career in NYS Senate TV
- Worked in agency world for 5 Years
- Founded DDW in 2004
- Produced 1st multi-cam live stream in 2006
- Provides full-service live production today



Dudley Digital Works
Video Marketing & Communications



WEBCASTING
Powered by Dudley Digital Works

What we'll cover

- Live production formats
- Live-to-drive vs. live streaming
- Building a live production team
- Choosing the right tools for the job
- House sound vs. broadcast sound
- Maximizing your production budget

Multi-Camera Formats

1. Conferences and Meetings
2. Talk shows
3. One-on-one interviews
4. Music, theater, sports +more



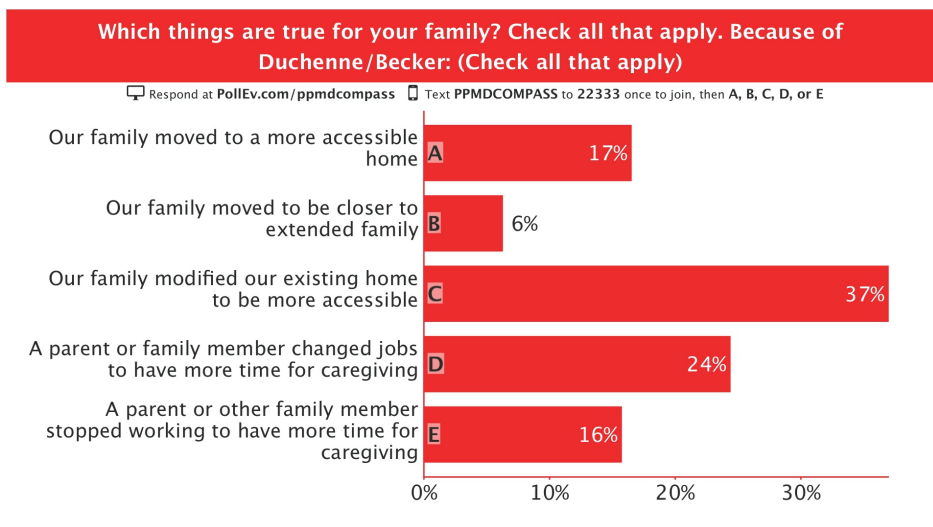
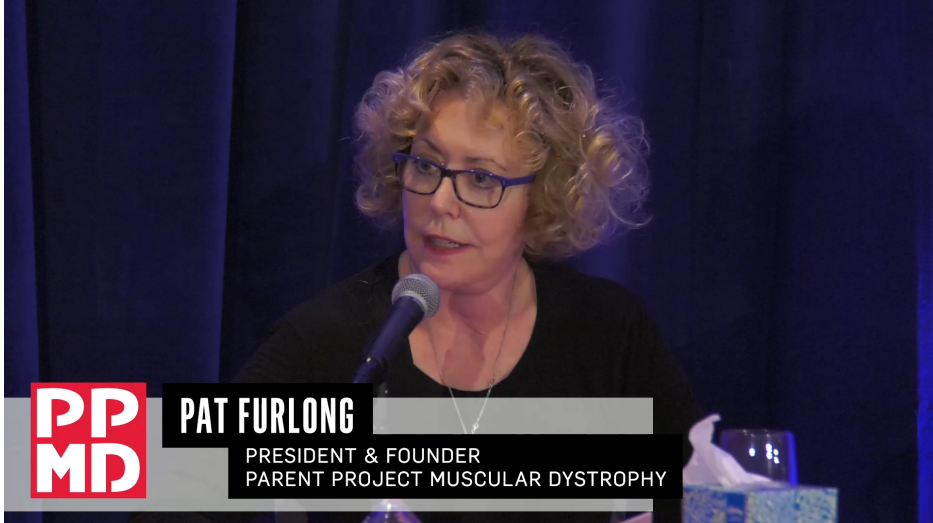
Conferences & Meetings

Conferences & Meetings

- Conducted in hotel or meeting spaces
- Address or panel discussion focused
- Broadcast is not the only focus
- Working in tandem (or around) A/V
- Requires integrating into event workflow
- Planning and logistics determine success

Conferences & Meetings

- Live switch or edit in post?
- How many cameras are required?
- What's your recording strategy?
- Can you achieve the right positions?
- Are your lenses long enough?
- Do you need more than house lighting?





**What you don't know
will hurt you.**

The Pre-Event Site Survey

- Initiate venue communication ASAP
- Check power drops and circuits
- Develop camera/lighting plan
- Determine an audio strategy
- Connect with IT early if live streaming

House sound
is different from
broadcast audio





Talk Show & News Formats

Talk Show Productions

- Conducted in studio or on location
- You control the set and the workflow
- Conversational with a host (teleprompter)
- Three matching camera minimum
- Lighting and set design required
- Sound engineer/recordist needed



SPORT: BIATHLON

**SCHOOL: IDAHO
VIRTUAL
ACADEMY**

ARIANA WOODS AGE **18**



WINTER OLYMPICS

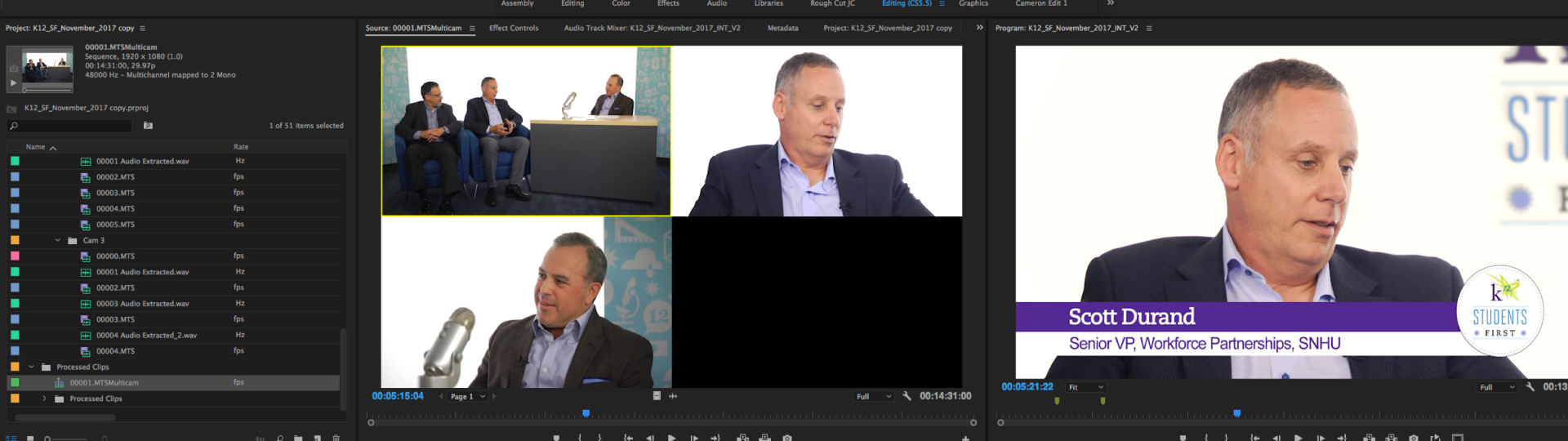
One-on-One Interviews



One-on-One Interviews

- Conducted in studio or on remote location
- You control the set and the workflow
- Interviewer and subject are on-Camera
- Two matching camera minimum
- On-the-fly light, sound and set design
- Can be delivered in full or cut-down





Delivering Live to Drive

Live-to-drive tips

- Have a camera sync workflow established
- Sound is just as important as picture
- Pick-ups are OK... if you do it right
- Nobody ever regrets redundancy
- Bridge the divide between field and post
- Trust and follow your process



Live Switch and Streaming

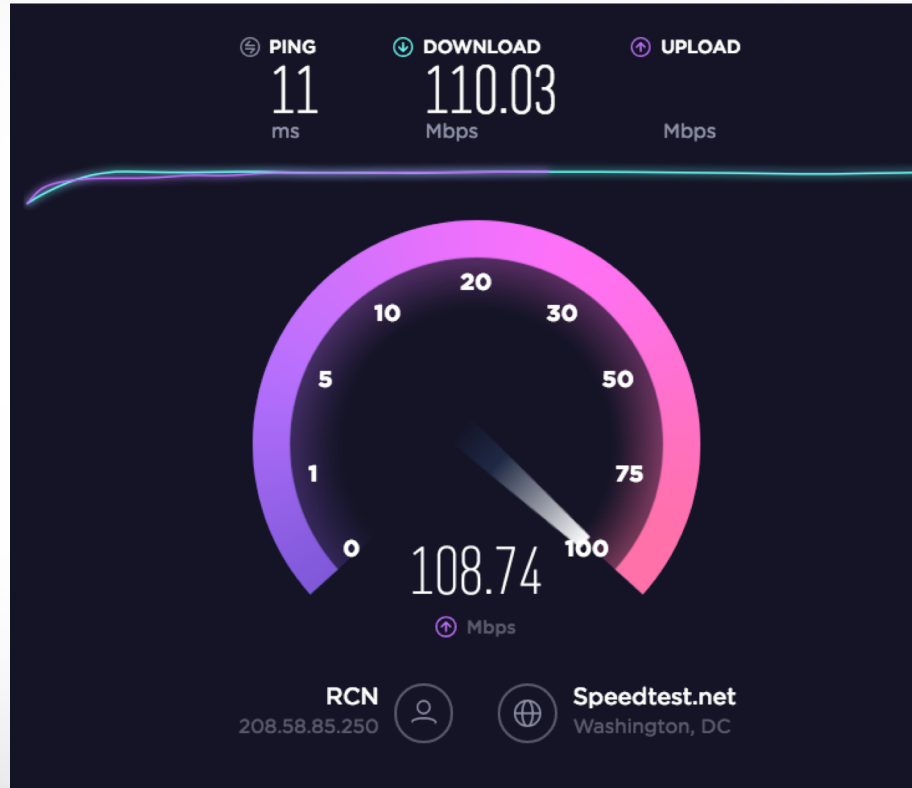
Broadcast and streaming tips

- Invest in pre-production and a strategy
- Pre-build as much as you can
- ID your shot caller & let them drive
- Synchronize camera, sound and GFX
- Have a means of crew communication
- Follow your process, but be flexible

Speed Kills

- You're only as good as your connection!
- Don't make any assumptions!
- Bring IT into the fold from the start!
- The bigger the pipeline, the better!
- Test location upload speed repeatedly!

Speedtest.net



The Recipe for Failure

- Lack of Preparation
- Incompetence
- Inflexibility
- Complacency
- Cutting Corners



All-In-One Solutions



Switching & Encoding Hardware



TriCaster TC1
with TC1LP
(4K 60p Capable)



Switching & Encoding Software



Wirecast









**What's the best
solution?**



**It's only time
and money.**

DIY Multi-Camera Model

Edit in post

- Utilize safety lock down camera positions
- Isolate audio tracks
- Envision the final product during recording
- If unsure, get multiple takes

Mid-Tier Multi-Cam Model

Live switch and stream

- Technical Director
- Camera Operator (1-3)
- Audio Engineer
- Stream Tech / Utility Infielder

Enterprise Productions

Big Spender Model

- Producer/Director/Floor Director/TD
- Camera Operators (4+)
- Lighting Director/Gaffers/Grips, etc.
- Dedicated Audio Engineers
- Front & Backend Stream Support
- and many more...

Finding a Balance

What's the scope and budget?

What's the deadline?

Risk vs. reward?

Production complexity vs. project goals?

Do you have the talent and tools to execute?



**The job determines
the right tools.**

Building Your Toolbox

Camera Requirements

- Resolution – 480p, 720p, 1080p, 4K?
- Format – NTSC, PAL or both?
- Outputs – SDI, HDMI or both?
- Servo Zoom or DSLR Lenses?

Building Your Toolbox

Lighting Requirements

- Tungsten, daylight or variable?
- Wattage - short or long throw?
- Incandescent, fluorescent, LED or HMI?
- Grip and electrical support?

Building Your Toolbox

Sound Requirements

- Field mixer or console?
- Analog or digital?
- Lavs, headsets or handheld?
- Wireless or cabled?



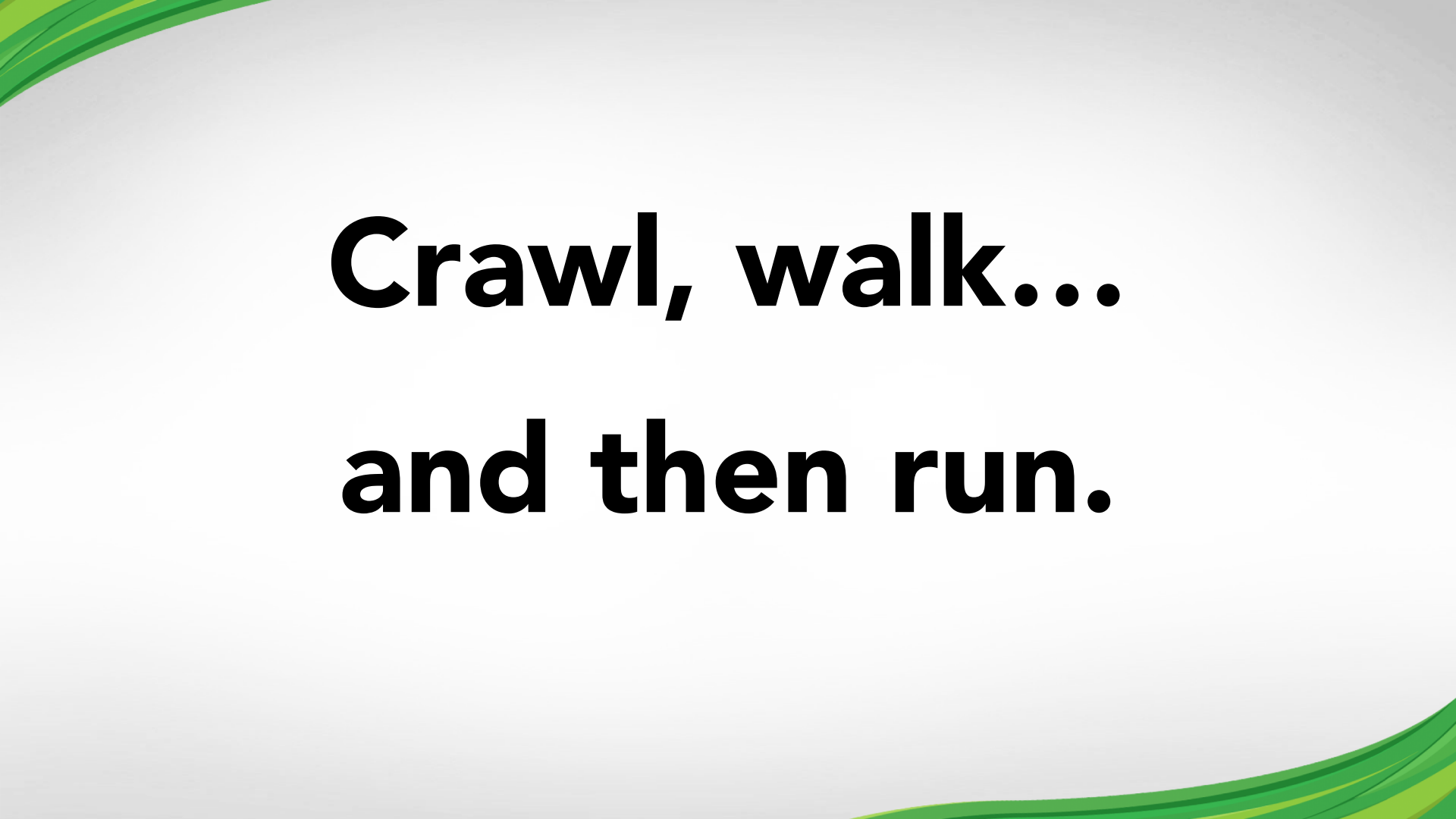
**It shouldn't be the
first time, every time.**

Live multi-cam is all about...

1. Shaping/managing expectations
2. Creating an executable strategy
3. Aligning all the moving parts
4. Foreseeing potential problems

Live multi-cam is all about...

- 5. Having solutions at the ready
- 6. Delivering on your promises
- 7. Having the right partners
- 8. Trusting/following your process



Crawl, walk...
and then run.

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