QUALITY IN QUANTITY for Mass Digitization

Benjamin H. Turkus & Kelly R. Haydon, Bay Area Video Coalition, IASA, Washington D.C., September 28th 2016
DYNAMIC
TOWN
HALL
Mass Digitization, Automation, & the need for QCTools
What Makes QCTOOLS UNIQUE?
• Free ($$)
• Aligned with FFmpeg
• F/OSS
• User-driven, for archivists by archivists
• Part of an expanding universe of related tools (Media Conch, vrecord)
• Educational
Homebrew installer; which allows users to install directly from the git master (the latest snapshot of the code) This has made fixing bugs and soliciting active feedback much, much easier.

```
brew install --HEAD amiaopensource/amiaos/qctools
brew linkapps qctools
```

Note that occasionally QCTools uses features from git-master of FFmpeg, thus you may need to update FFmpeg to git-master as well to try the newest pre-release QCTools features.

```
brew reinstall --HEAD ffmpeg
brew install --HEAD amiaopensource/amiaos/qctools
brew linkapps qctools
```
NEW STUFF

- 10-bit processing (previously 8-bit, so instead of 0-255 scale, now 0-1023) and, more recently, adaptive bit-depth processing;
- New preferences settings, which allow users to select between processing filters;
- New playback visualizations (improved waveform and vectorscope, CIE Scope; datascope);
- New filter sets (cropdetect, pillar- or letterboxing), SSIM (structural similarity metric), idet (interlacement detection), bitplane noise, astats (max min audio levels, DC offset, audio sample diff)
DEMONSTRATION
D3 Visualizations
https://d3js.org/
# SIGNAL SAMPLES

[https://github.com/bavc/signalserver](https://github.com/bavc/signalserver)

- List, Search, and Upload QCTools files

## File List, Search and Upload

### List of all loaded files by you
- 11_DAN_Rogers2_uminic_error_ffv1.qctools Uploaded time: Sept. 21, 2016, 2:36 a.m. Delete
- 12_DCH0177_heavydropout_ffv1.qctools Uploaded time: Sept. 21, 2016, 2:36 a.m. Delete
- 13_DCH0177_heavydropout_ffv1.qctools Uploaded time: Sept. 21, 2016, 2:36 a.m. Delete
- 14_DHC0267_trackingerror_ffv1.qctools Uploaded time: Sept. 21, 2016, 2:36 a.m. Delete
- BCL00457_ffv1.mov.qctools Uploaded time: Sept. 21, 2016, 2:36 a.m. Delete
- DAN_Marceau_4_ringing_ffv1.mp4.qctools Uploaded time: Sept. 21, 2016, 2:36 a.m. Delete
- ViolaArtifact Uploaded time: Sept. 21, 2016, 2:36 a.m. Delete

### List of all shared uploaded files
No file.

### File upload
- Select a file: max. 42 megabytes
  - Choose Files: No file chosen
  - Upload

### File Search
- Start Time: 2015/09/27 00:00
- End Time: 2016/09/26 00:00
- Exact file name or keyword in the filename (case sensitive):
  - [Search]
SIGNAL SAMPLES
https://github.com/bavc/signalserver

- Create “Groupings”
SIGNAL SAMPLES

https://github.com/bavc/signalserver

- Create and Edit Policies

Add/Delete Filter on Policies

Policy Name: hello1

TOUT average Delete
PSNR I average Delete
Y LOW average Delete

Filter | Filter2 | None | Operation | average | Cutoff Number

0 | Display order 0 | Add
SIGNAL SAMPLES
https://github.com/bavc/signalserver

- Analyze a single file or a batch

Graphs from the file processed data

File Name: 11_DAN_Rogers2_umatic_error_ffv1.qctools
Signal Name: lavfi.signalstats.TOUT
All About TOUT
(Temporal Outlier filter)
<tag key="lavfi.signalstats.TOUT" value="0.610477"/></tag>
Upload QCtools reports, which can be generated in one of two ways:

- GUI

- Command line
  
  https://github.com/kieranjol/IFIscripts/blob/master/qctools.py
SIGNAL STEPS

- Create Group ("newgroup")
Set Policies ("Tracking Errors")
SIGNAL STEPS

- Run Process

List of all groups

- Group name: newgroup- Edit

Creation time: Sept. 24, 2016, 8:03 a.m. Policy Tracking Errors Process
SIGNAL STEPS

- Report, Identify