



# ***Project Update***

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# *Commercial Removal*

## **The Task**

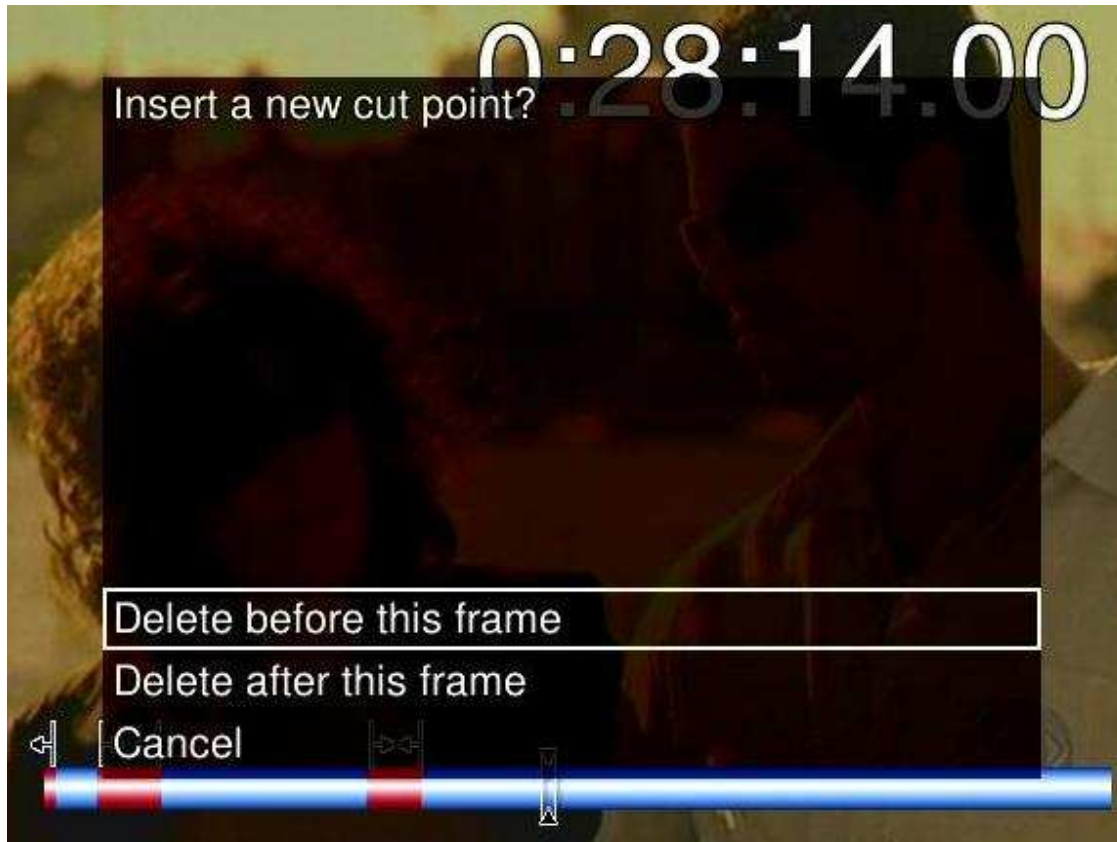
- ⑥ Remove all the commercials from a recorded TV program.
- ⑥ Do this quickly.
  - △  $\approx$  2 minutes per hour of TV is the goal.
- ⑥ Fully automatic solutions do not work well enough – too many false positives and negatives.

## *Previous Work*

# Automatic solutions

- ⑥ Look for black frames indicating that a commercial is starting or ending.
- ⑥ Look for patterns in audio indicating commercials.
- ⑥ Look for station identification “bug”.

*cont'd*



## Manual solutions

- ⑥ Mostly like a VCR with some extra buttons.

# *Cluster Editor*

- ⑥ Idea: generalize a show into scenes that the user wants to see and doesn't want to see.
- ⑥ So cluster similar scenes together and let the user choose the partition.
  - △ Something like treemaps.

## *Other applications*

- ⑥ General video editing.
  - △ For example, remove all scenes at a certain location.
  - △ Less precise, but a good quick start.

# *Implementation Details*

- ⑥ Working off of mythtv code base.
  - △ <http://www.mythtv.org>
  - △ Limited user input support.
- ⑥ Written in C++ using QT.

# Status

- ⑥ Backend mostly done.
  - △ Scene detection speed/accuracy tradeoffs.
- ⑥ Still a lot to do with frontend.
  - △ Multiple metrics.
  - △ Better cluster interaction algorithms.



# Questions?

