

Computergrafik querbeet

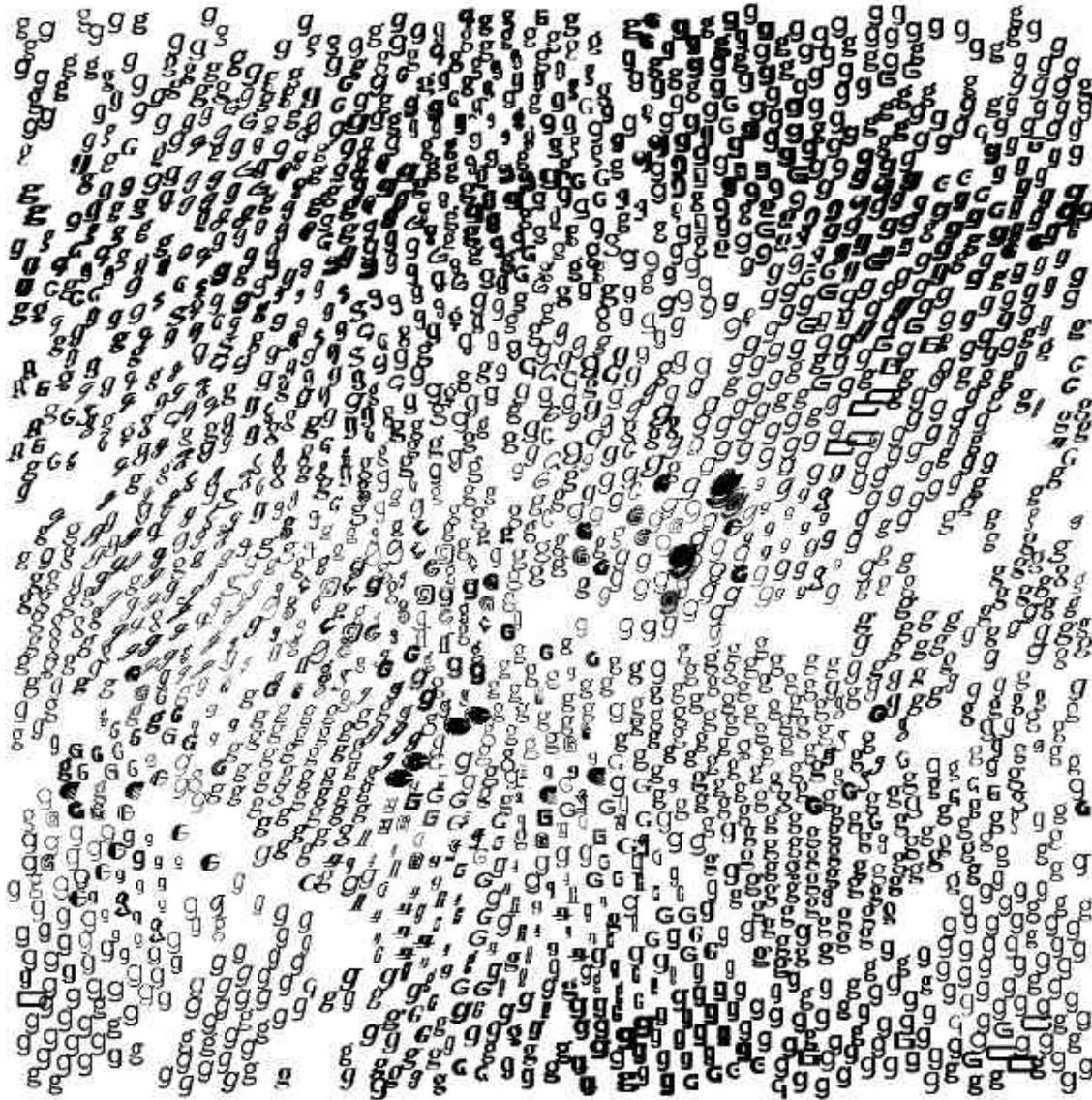
Jörn Loviscach

The logo of FH Bielefeld is a stylized, abstract shape composed of several horizontal bands of varying shades of orange and red, resembling a flame or a modern architectural element.

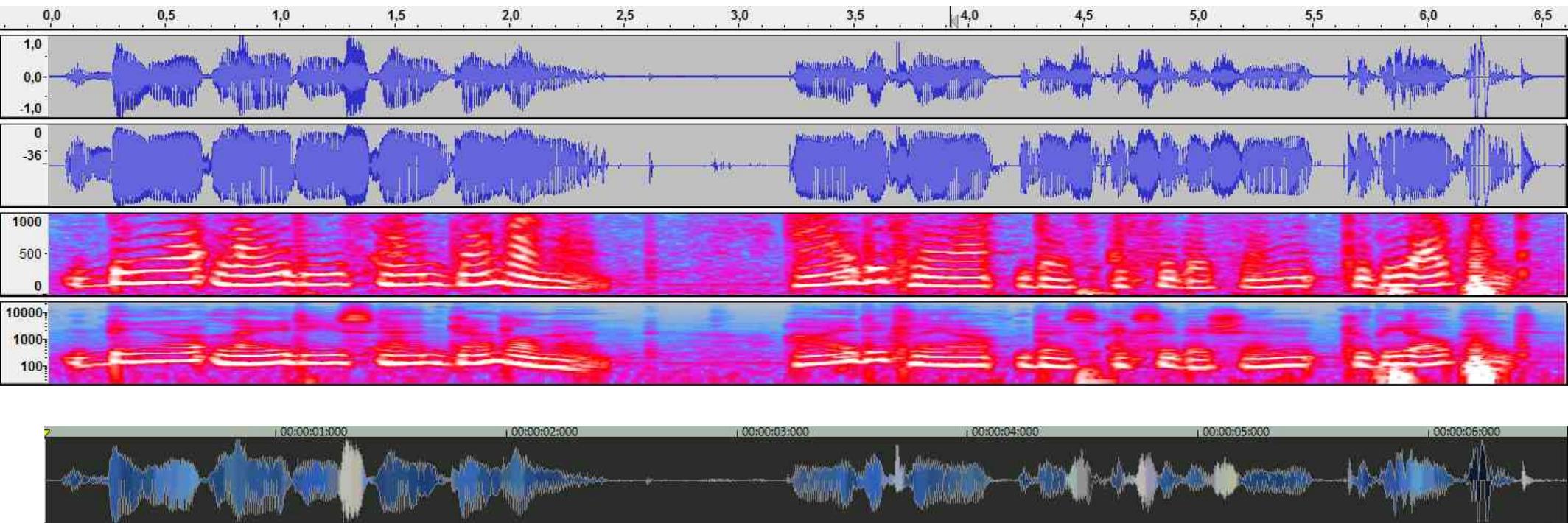
FH Bielefeld
University of
Applied Sciences

- **Datenvisualisierung**
 - Tausende Schriftarten im Überblick
 - Audio-Wellenformen zusammengefasst
- **Photorealismus**
 - Gold und Silber auf dem Bildschirm
 - Audio-Plug-ins mit Chromglanz
- **Videoproduktion**
 - Flinker Video-Editor
 - Transparente virtuelle Tafel
- **Bildverarbeitung**
 - Laserpointer malt Beleuchtung
 - 1-Pixel-Kamera für Thermografie

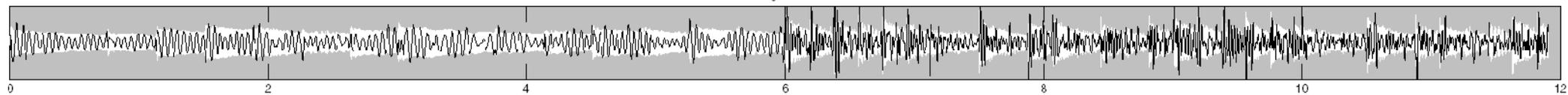
Tausende Schriftarten im Überblick



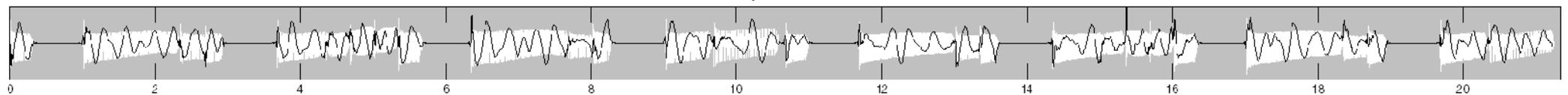
Audio-Wellenformen zusammengefasst



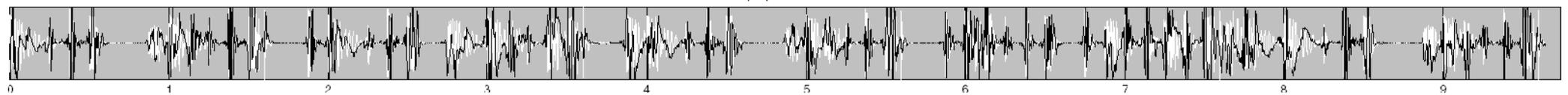
elstagslocken.wav



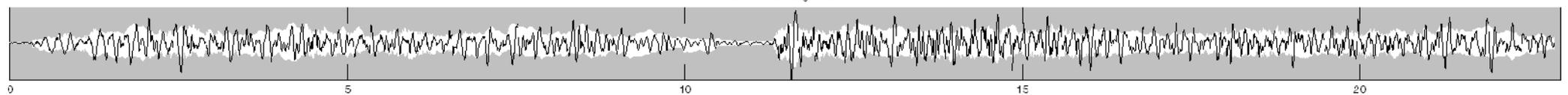
fingeredbass.wav



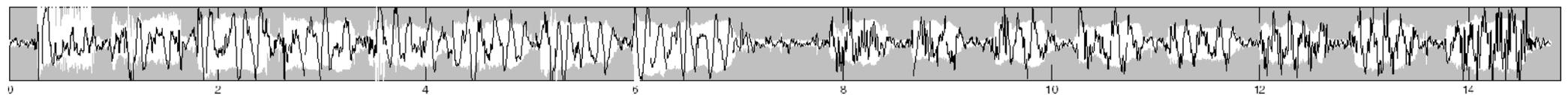
hiphcdrums.wav



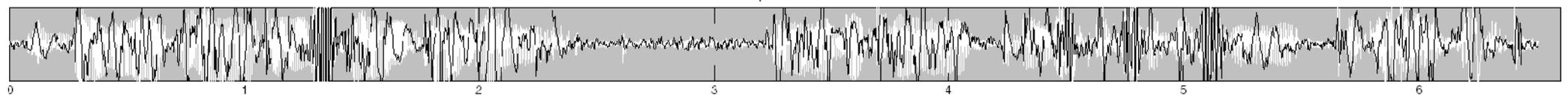
hornsmellowbright.wav



ooooee.wav

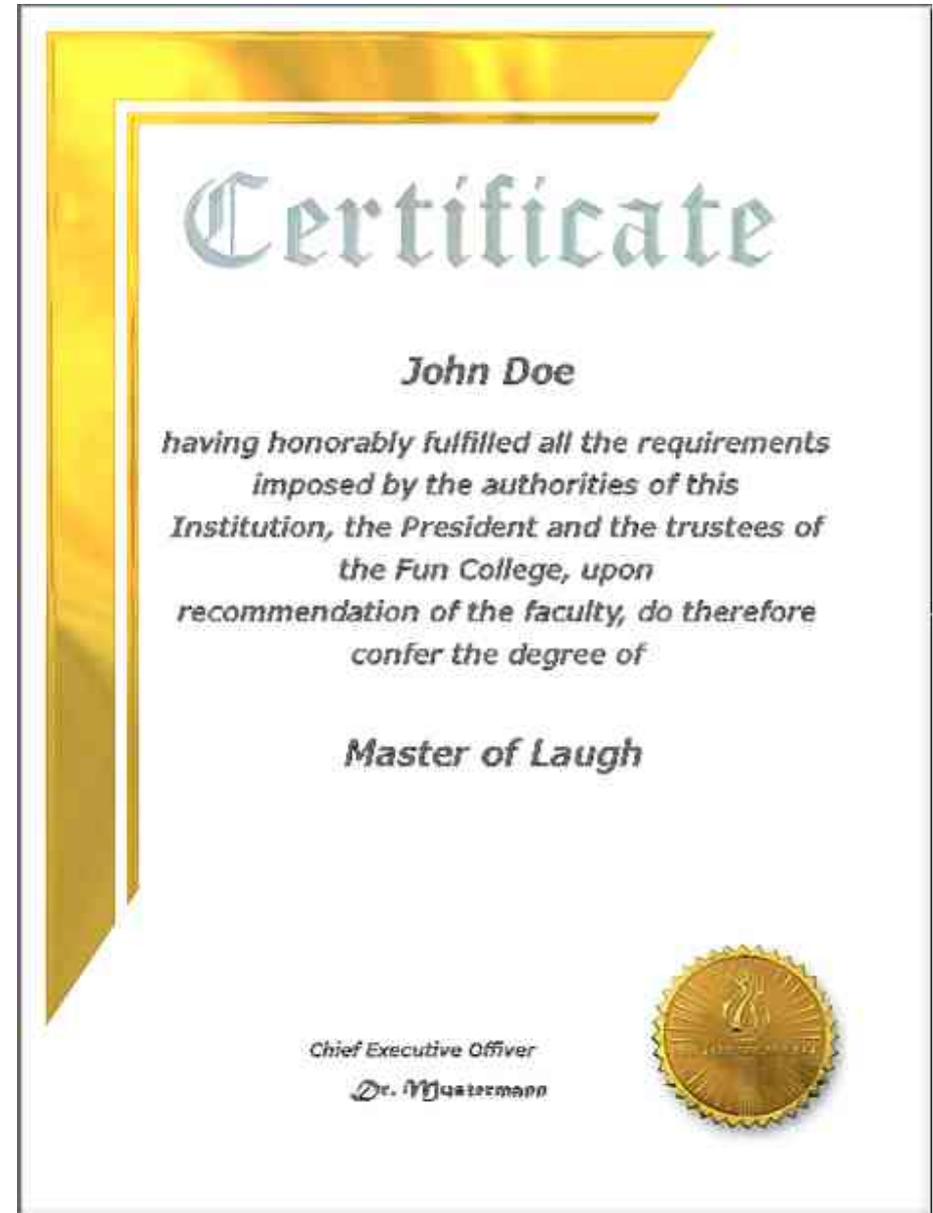


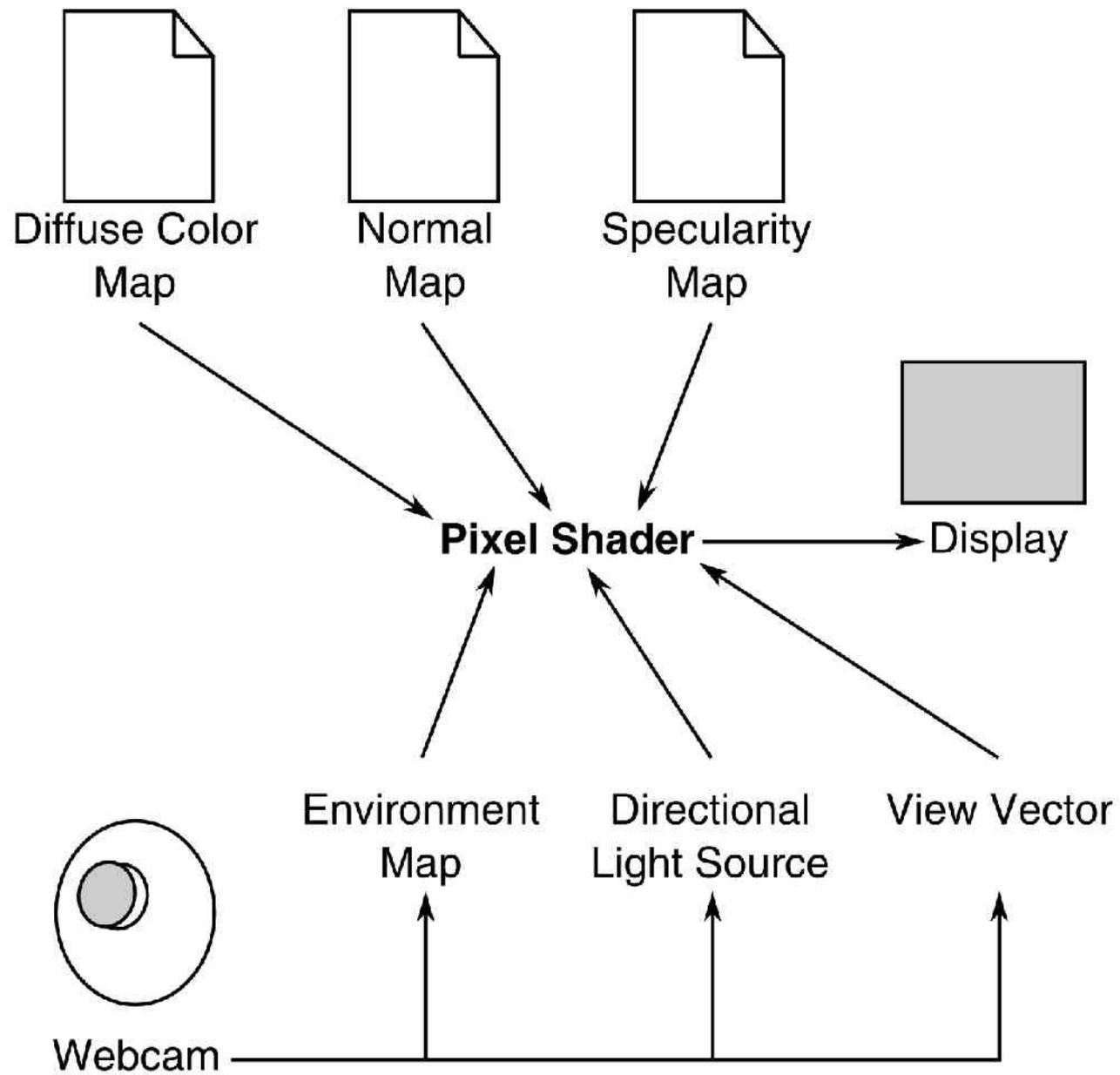
speech.wav



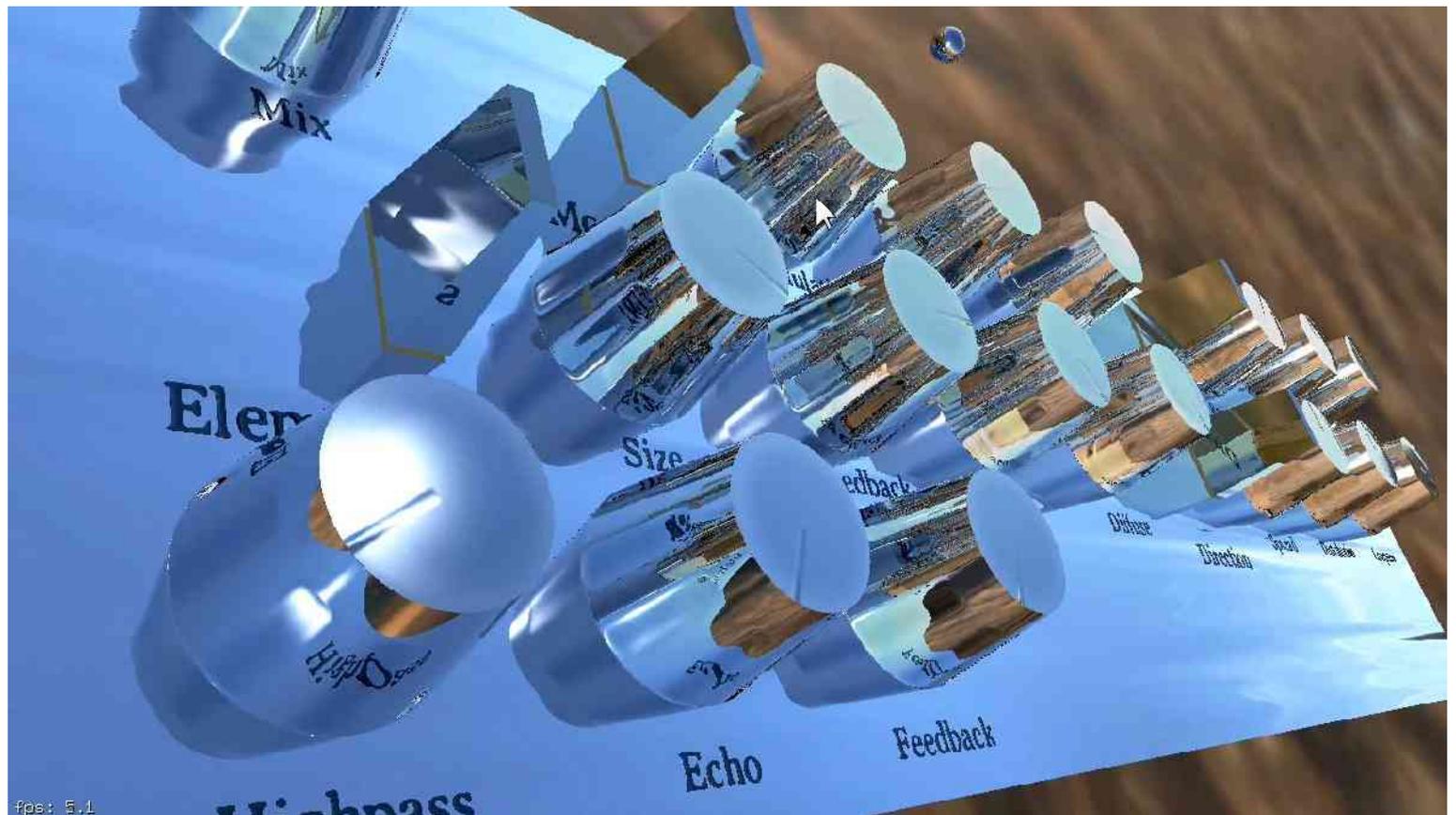
seconds

Gold und Silber auf dem Bildschirm

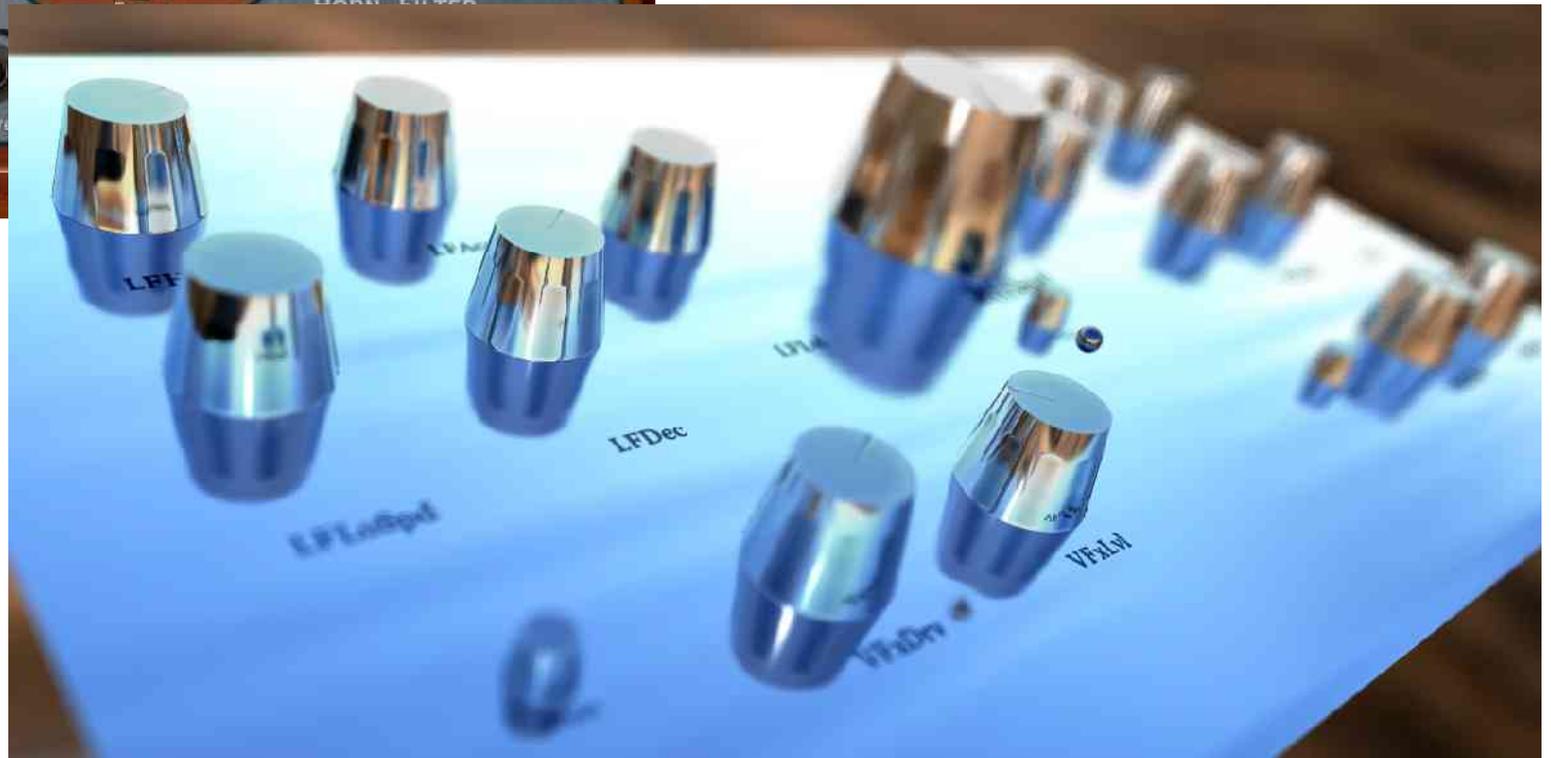




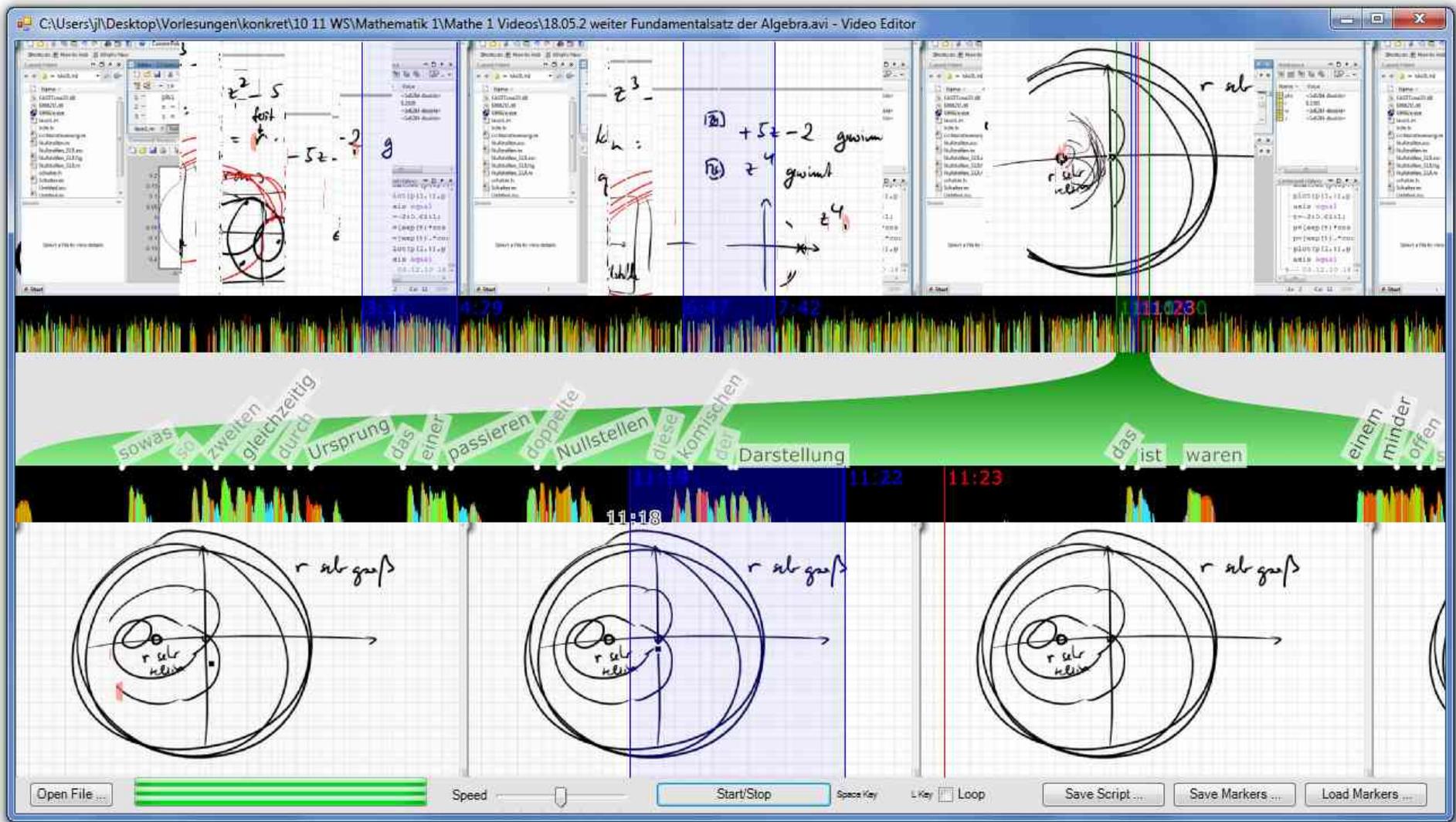
Audio-Plug-ins mit Chromglanz



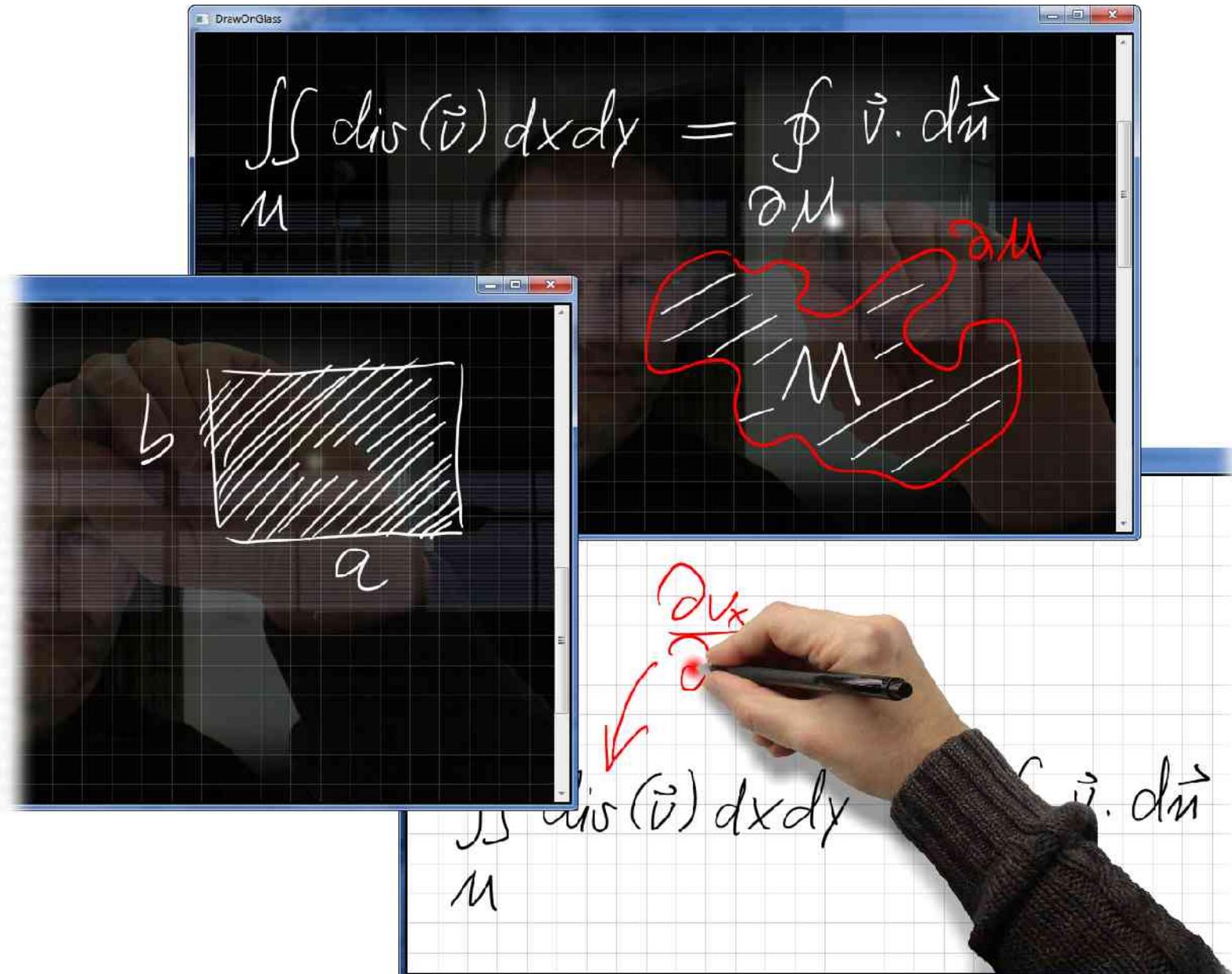
Audio-Plug-ins mit Chromglanz



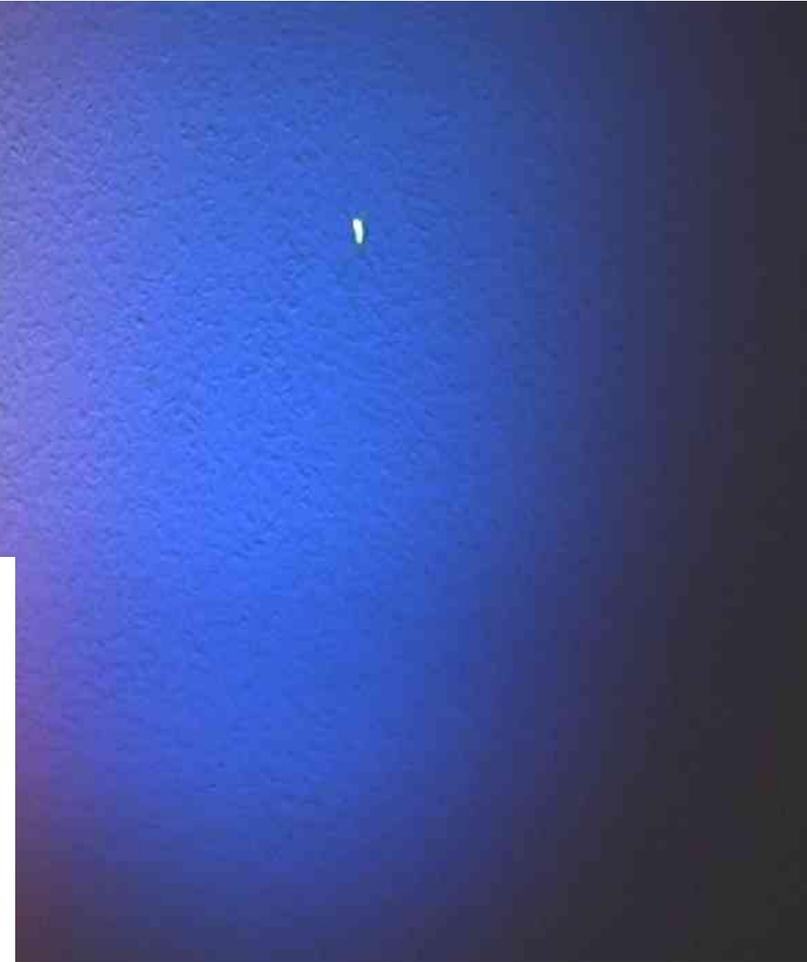
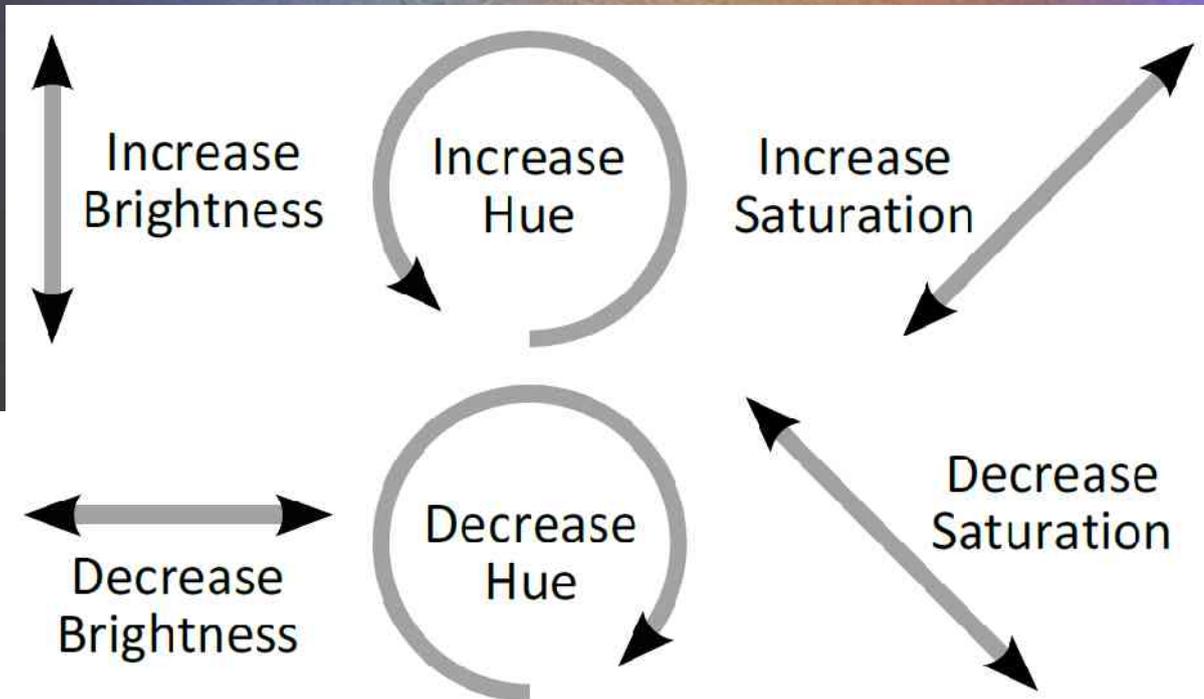
Flinker Video-Editor



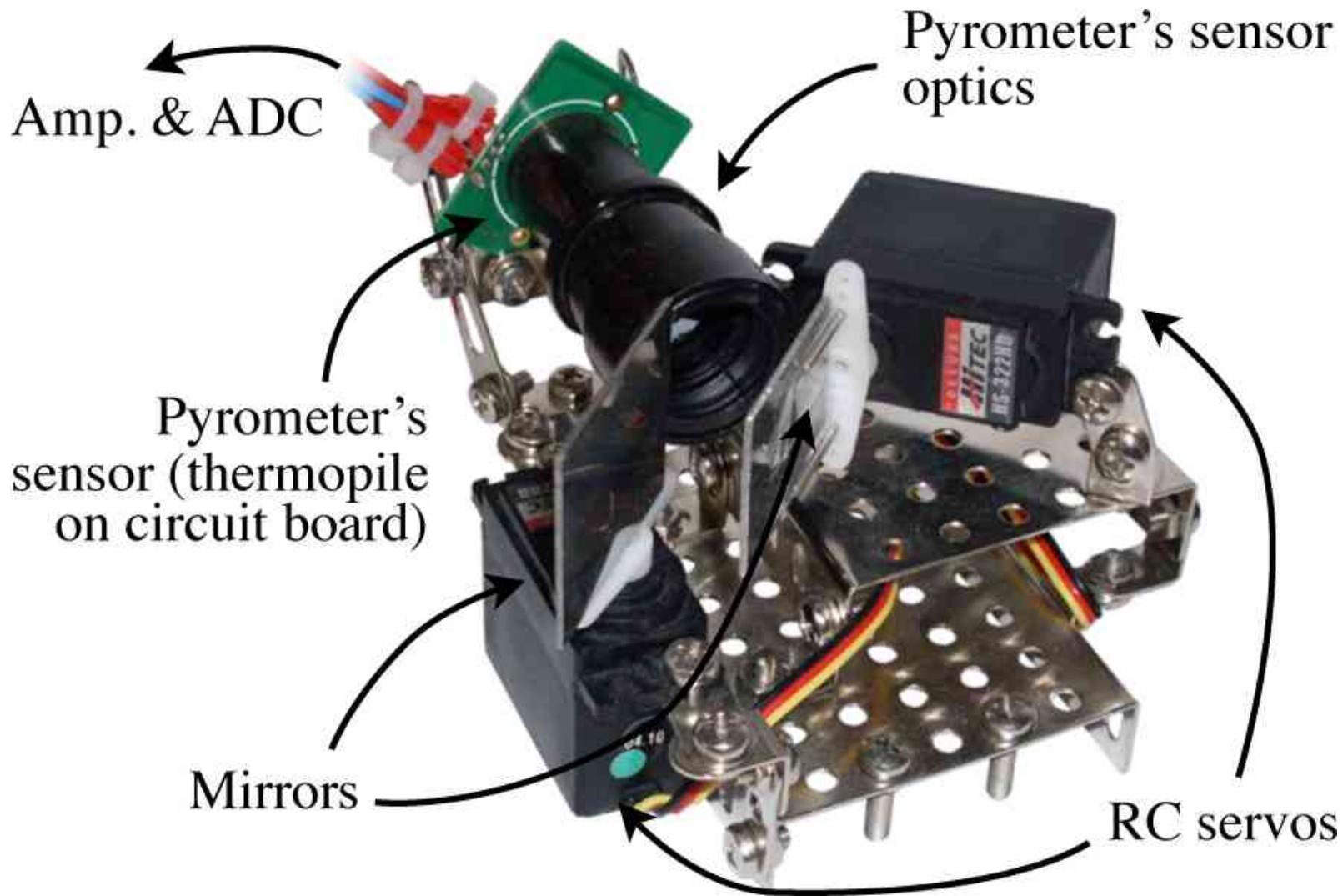
Transparente virtuelle Tafel

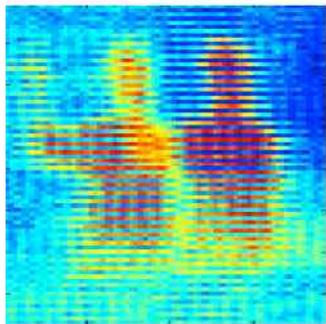


Laserpointer malt Beleuchtung

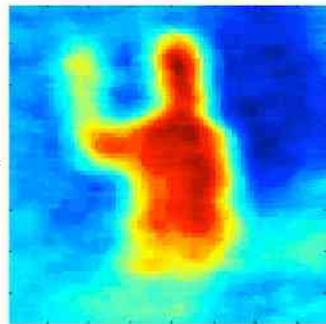


1-Pixel-Kamera für Thermografie

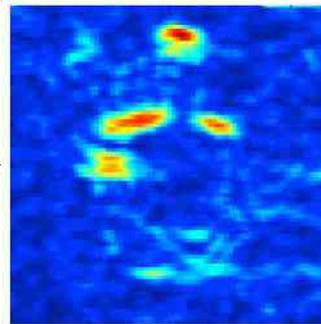




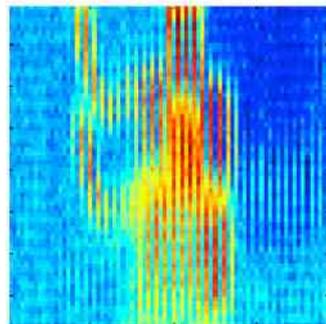
H1 = "Horizontal" scan
@ 5 ms delay time at
each point



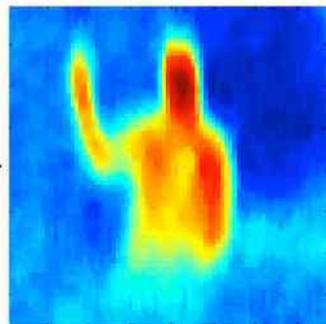
H2 = Inverse filtered
& 4 x 4 median filtered



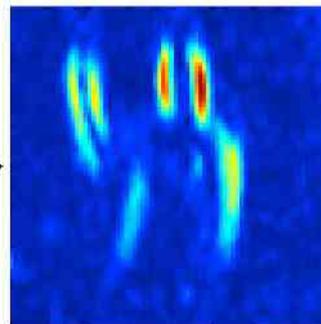
|H2'| = H2 partially
differentiated w.r.t. y,
abs. val. - edges found



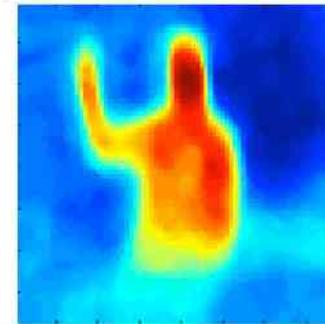
V1 = "Vertical" scan
@ 5 ms delay time at
each point



V2 = Inverse filtered
& 4 x 4 median filtered

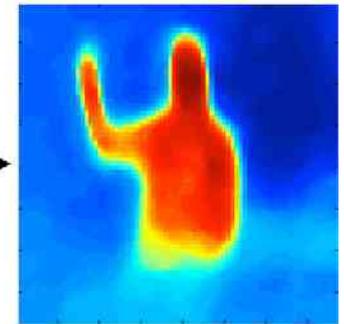


|V2'| = V2 partially
differentiated w.r.t. x,
abs. val. - edges found

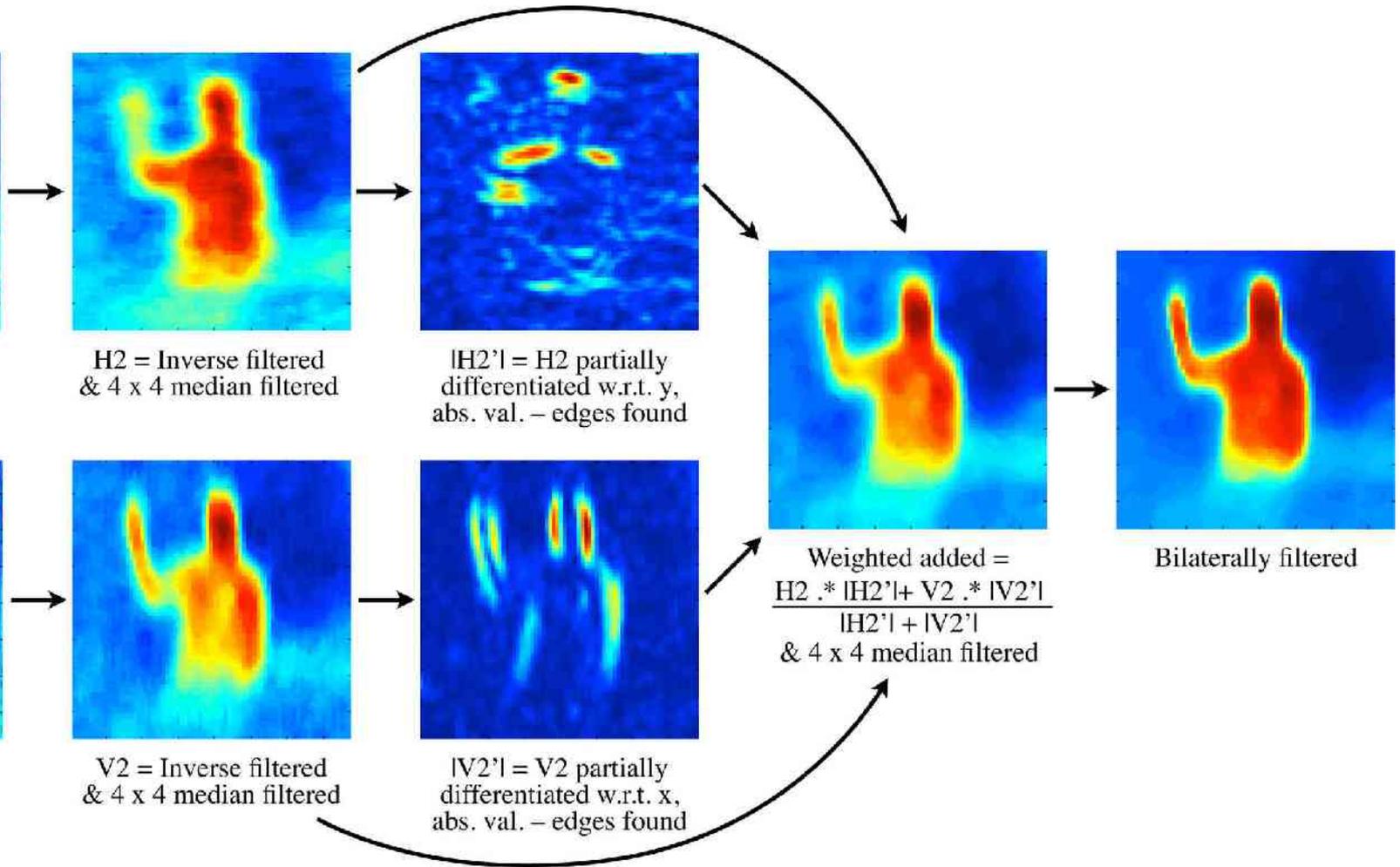


Weighted added =
$$\frac{H2 .* |H2'| + V2 .* |V2'|}{|H2'| + |V2'|}$$

& 4 x 4 median filtered



Bilaterally filtered



Vielen Dank!

joern.loviscach@fh-bielefeld.de