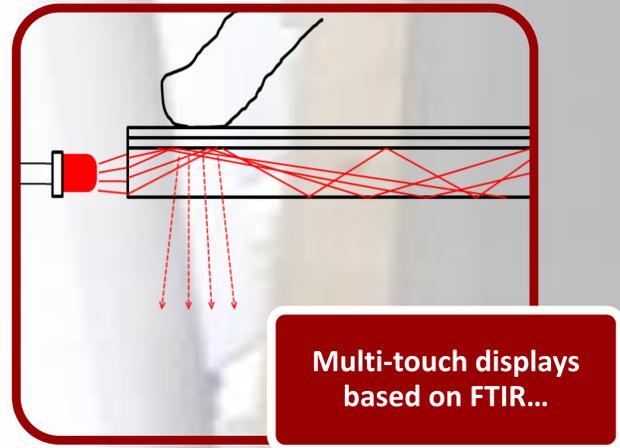


# Touch Sensing based on FTIR in the Presence of Ambient Light

Course project during winter 2007/08



Multi-touch displays based on FTIR...

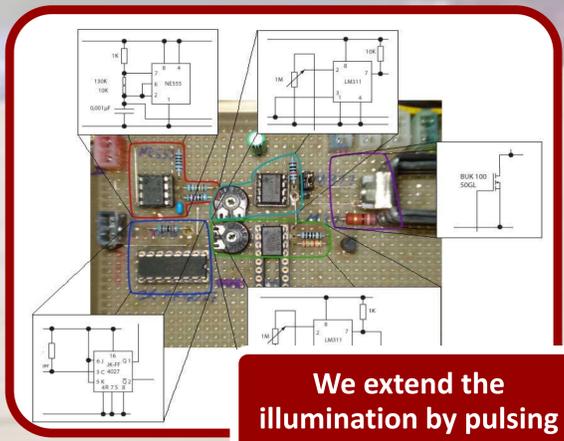


...are designed for dark environments because...

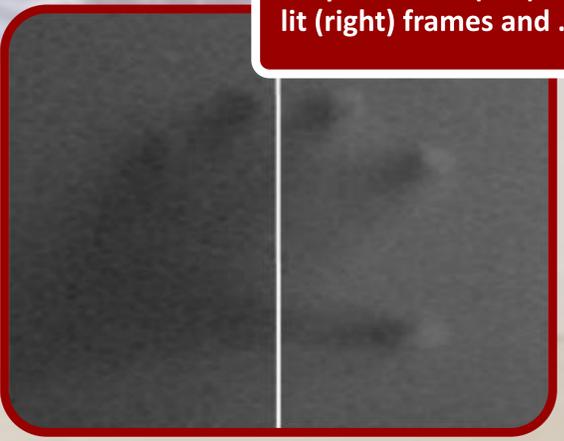


...this method has problems handling ambient IR light.

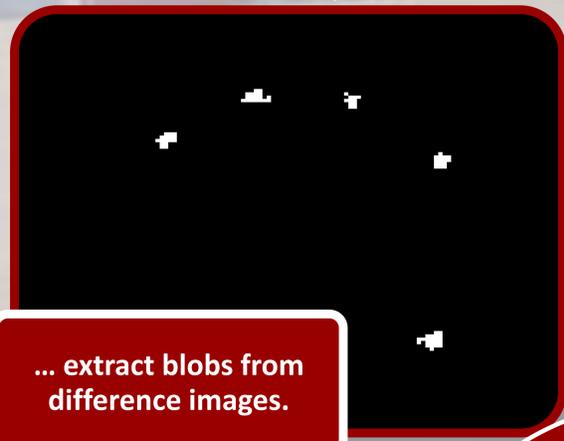
Marc Alexa, Uwe Hahne  
 Participating students:  
 Björn Bollensdorff, Ingo Breßler, Stefan Elstner, Nino Kettlitz, Norbert Lindow, Robert Lubkoll, Ronald Richter, Claudia Stripf, Sebastian Szczepanski, Karl Wessel and Carsten Zander



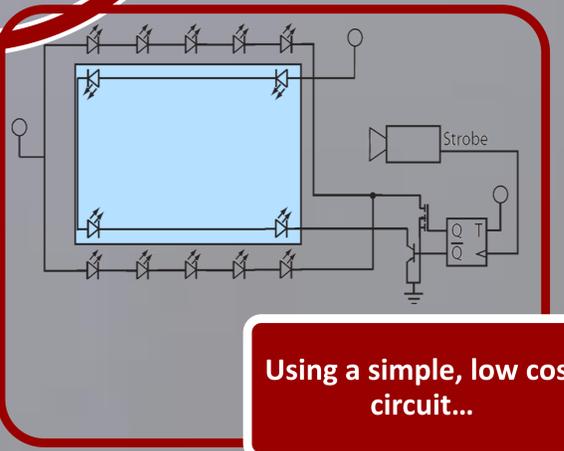
We extend the illumination by pulsing the LEDs, ...



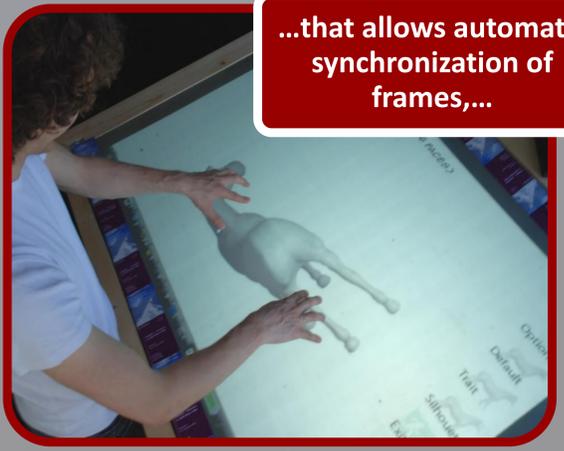
... capture unlit (left) and lit (right) frames and ...



... extract blobs from difference images.



Using a simple, low cost circuit...



...that allows automatic synchronization of frames,...



...makes the system applicable in daylight conditions.