

Surface computing: The post-PC experience

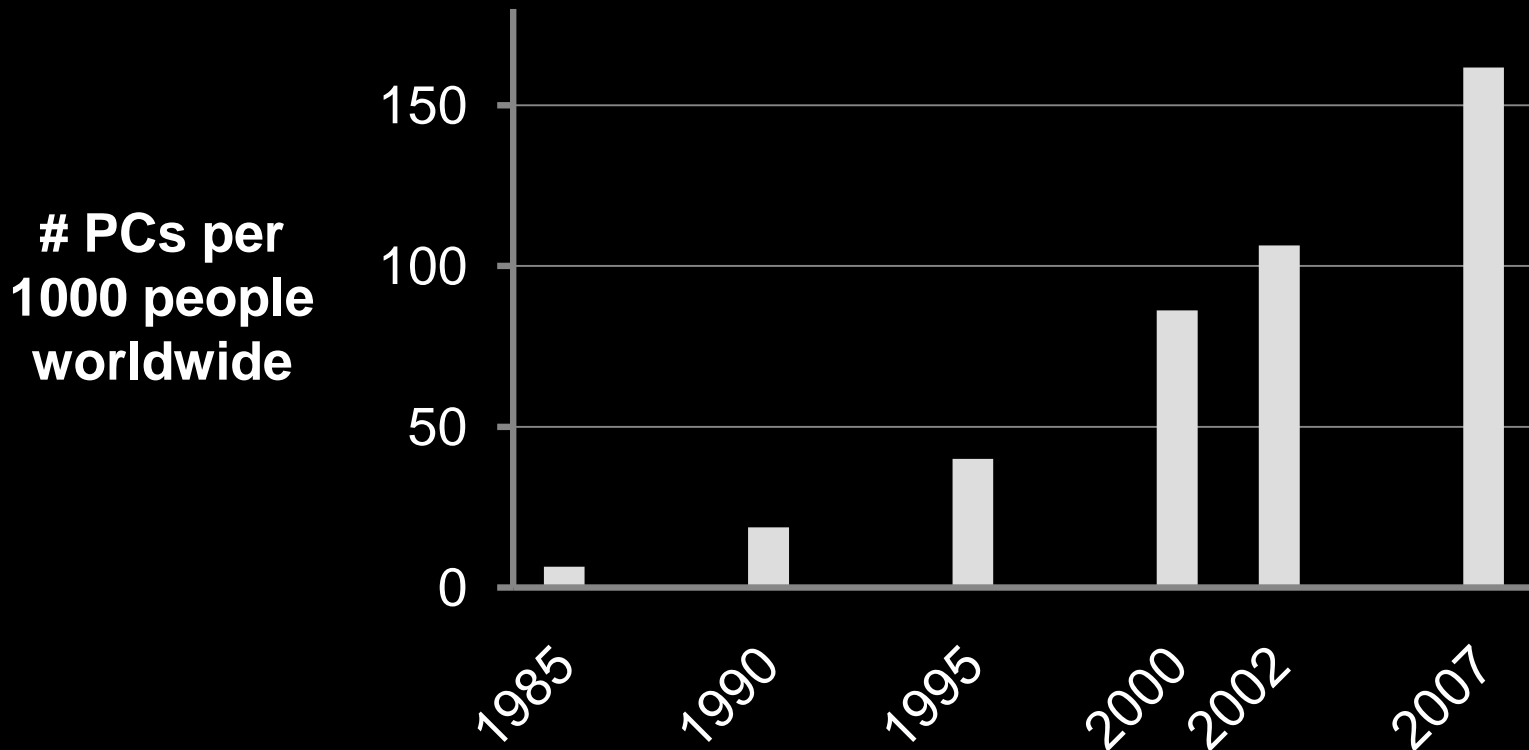
Steve Hodges

Microsoft Research Cambridge, UK

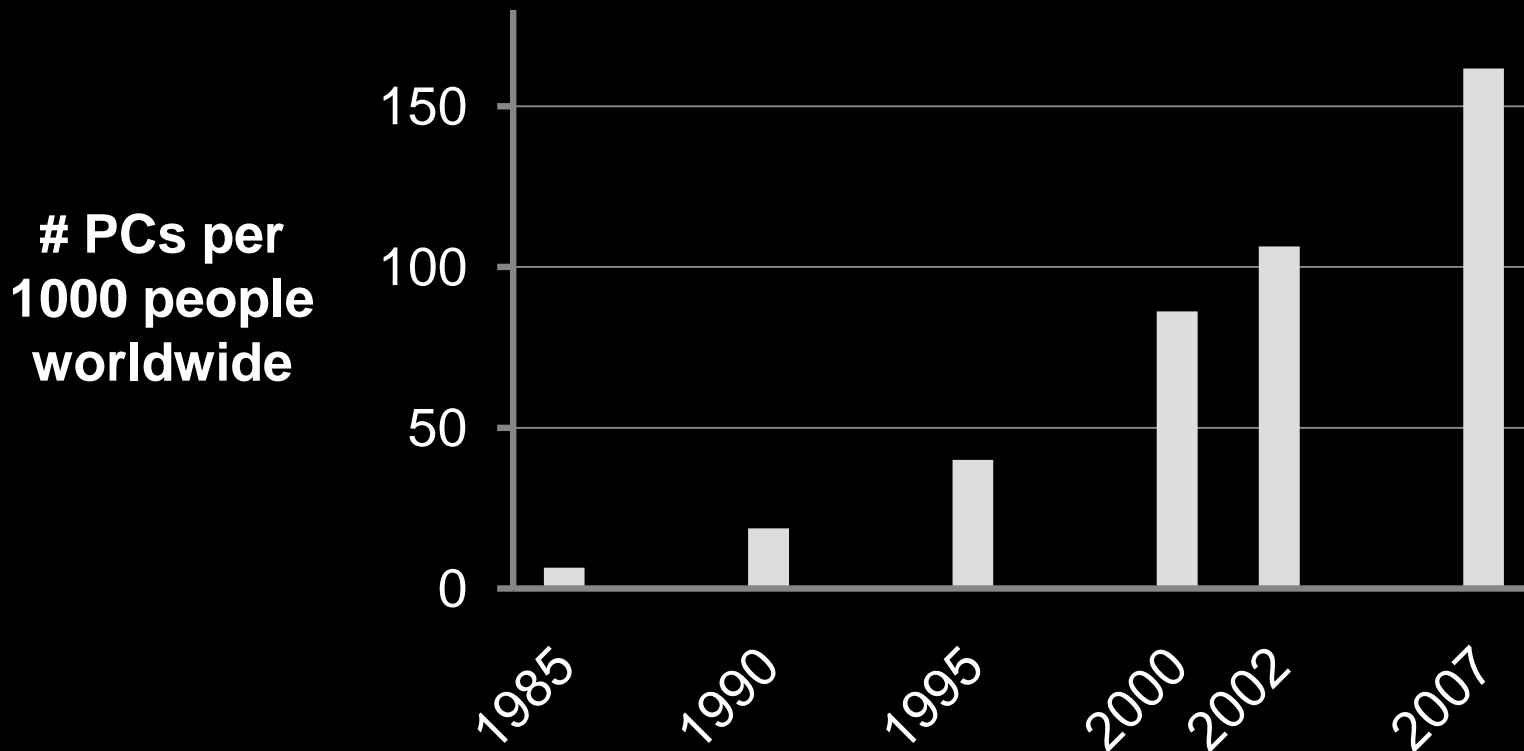
UKDL KTN, October 2008

The PC is dead?

The PC is dead?



The PC is dead? ...of course not!



The PC is just the beginning

- It will increasingly be complemented by other devices
- Focus will move beyond the desktop
- More powerful, intuitive and engaging applications
- A wider set of application domains

Surface Computing

Surface Computing



1. Display-centric

3. Multi user

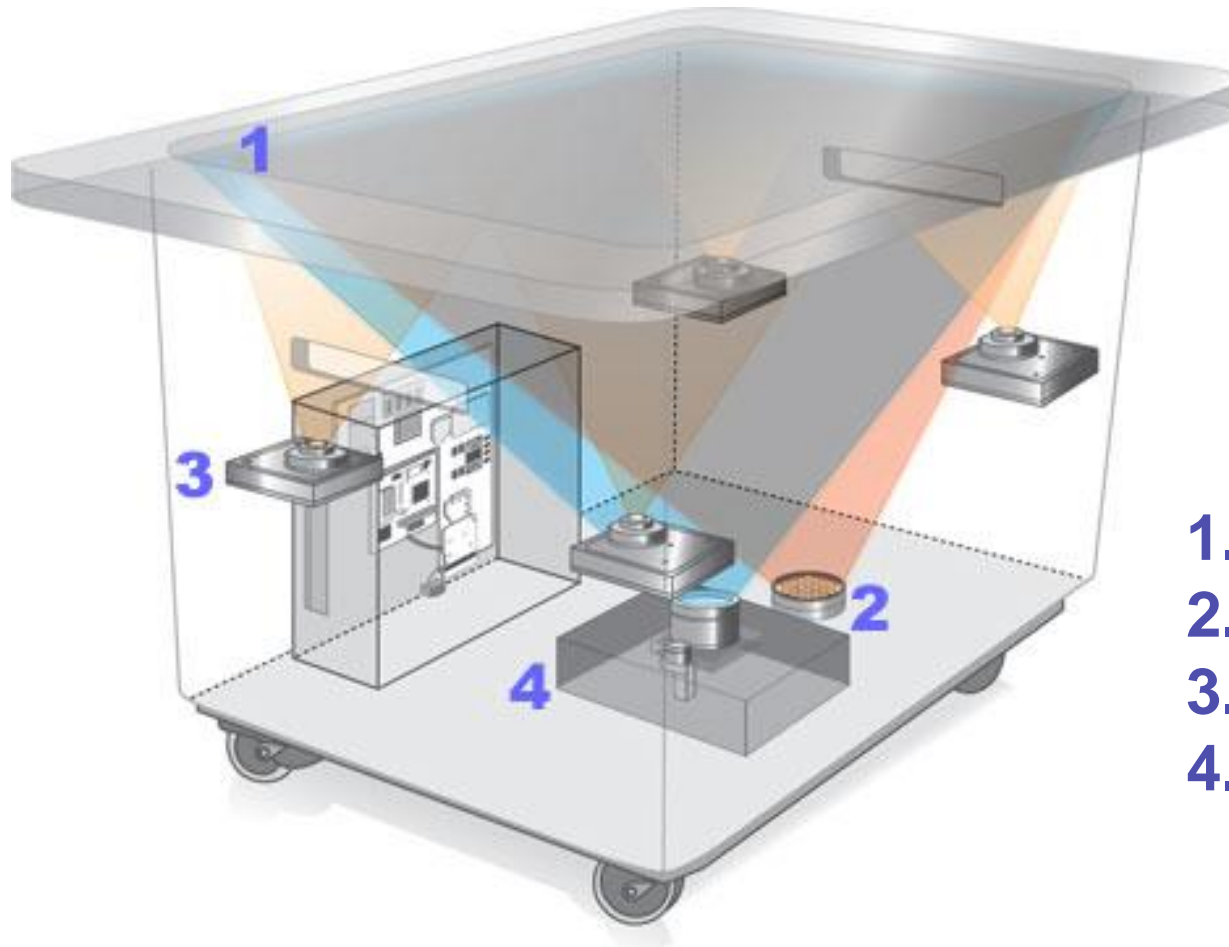
2. Direct input

4. Tangible objects

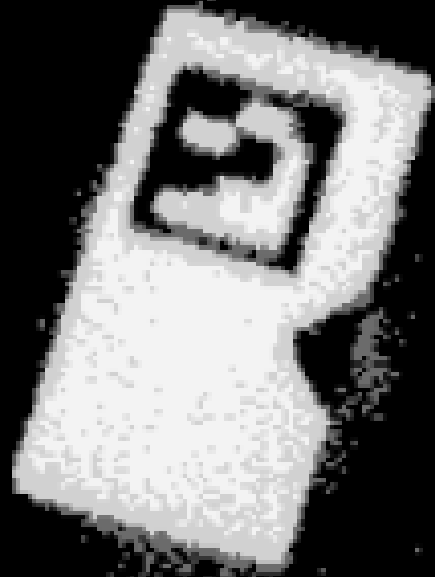
Blending of physical and virtual interaction



How does Surface work?



1. Diffuser
2. IR illuminant
3. IR camera
4. Projector



Rear camera + projection



Rich sensing

Capacitive



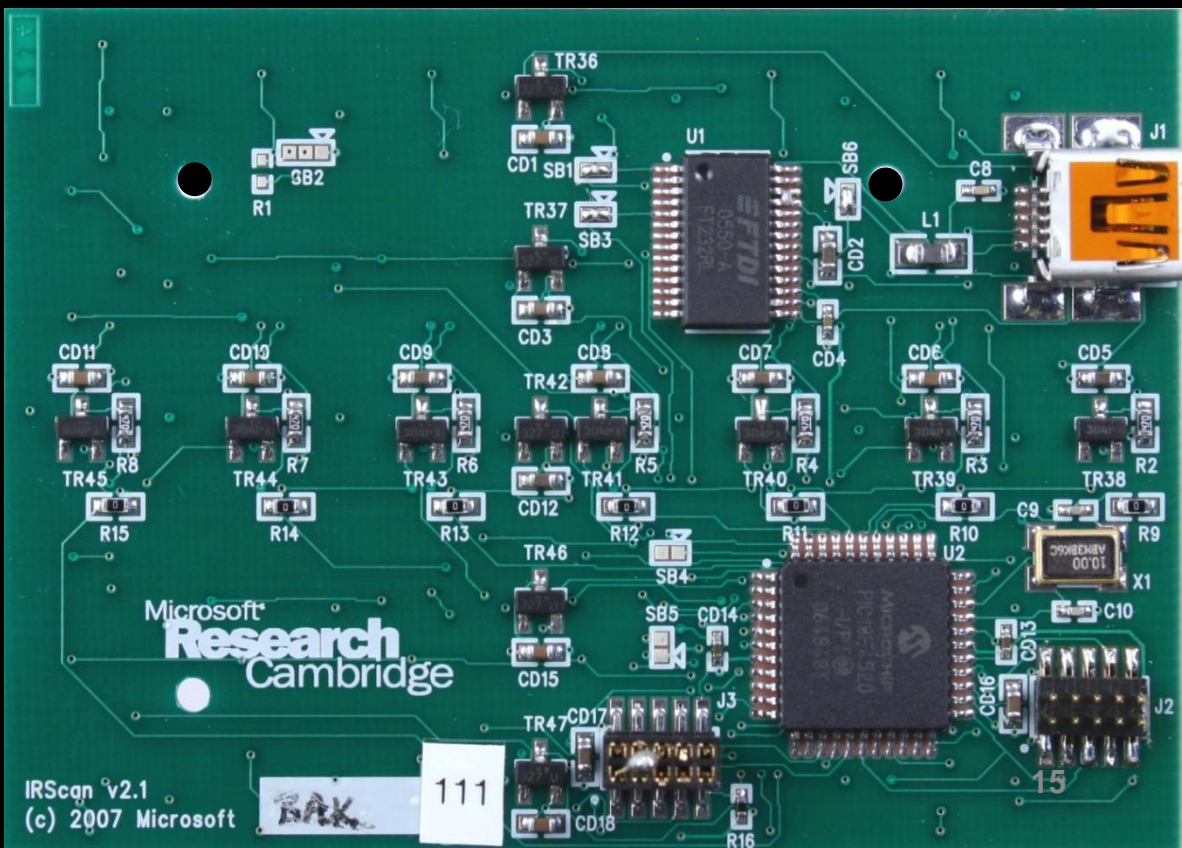
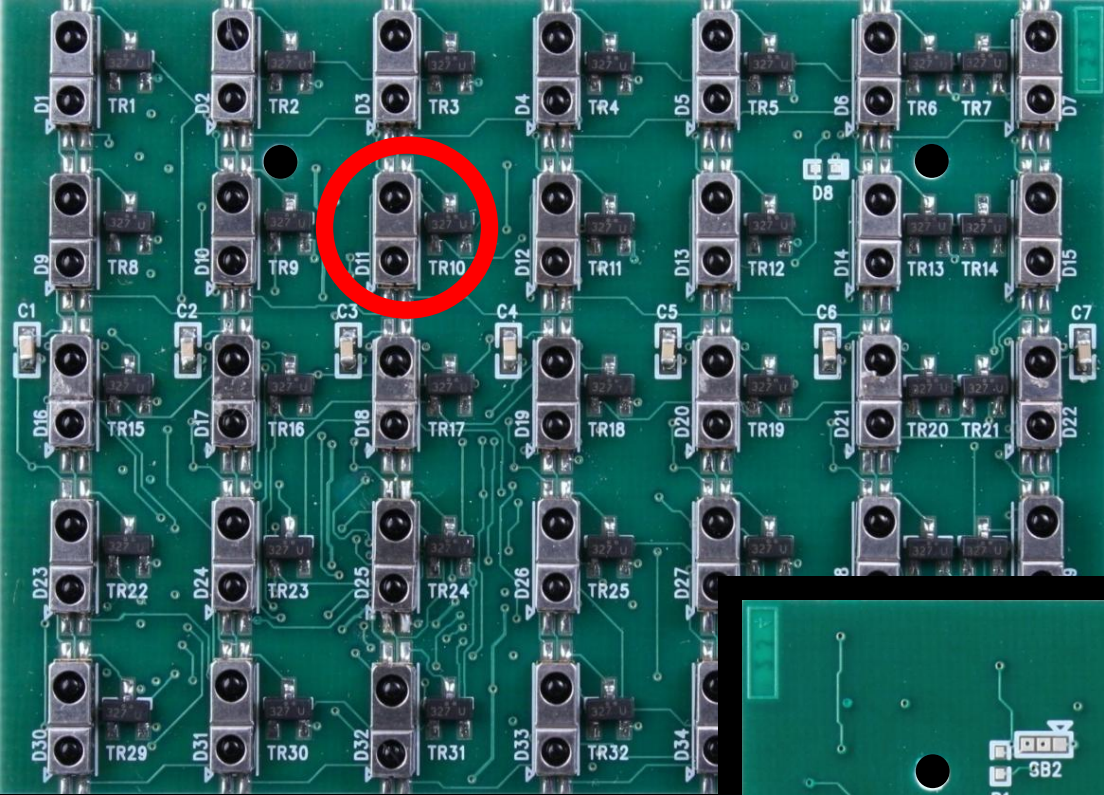
Thin
form-factor

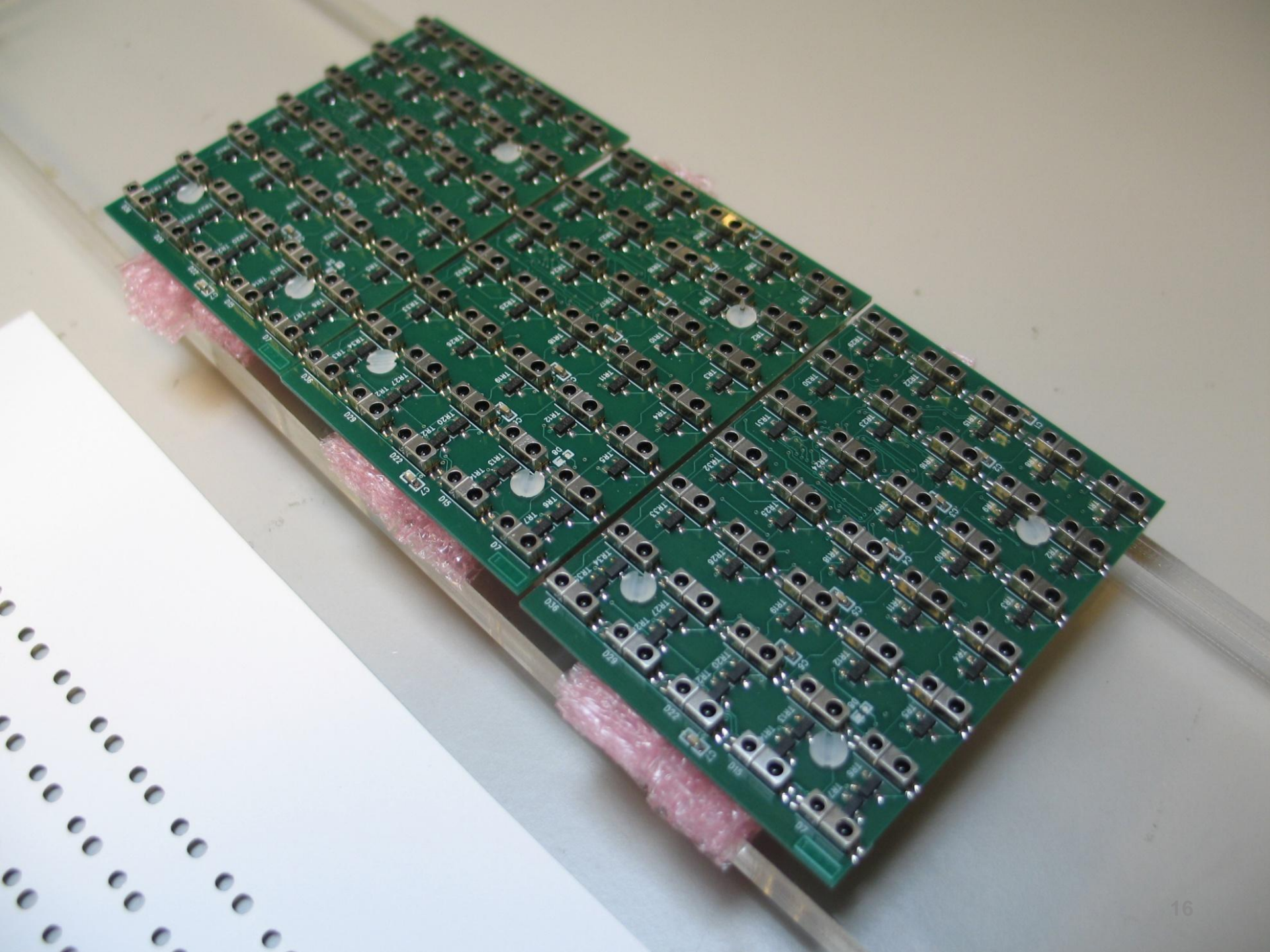
Surface Computing Research

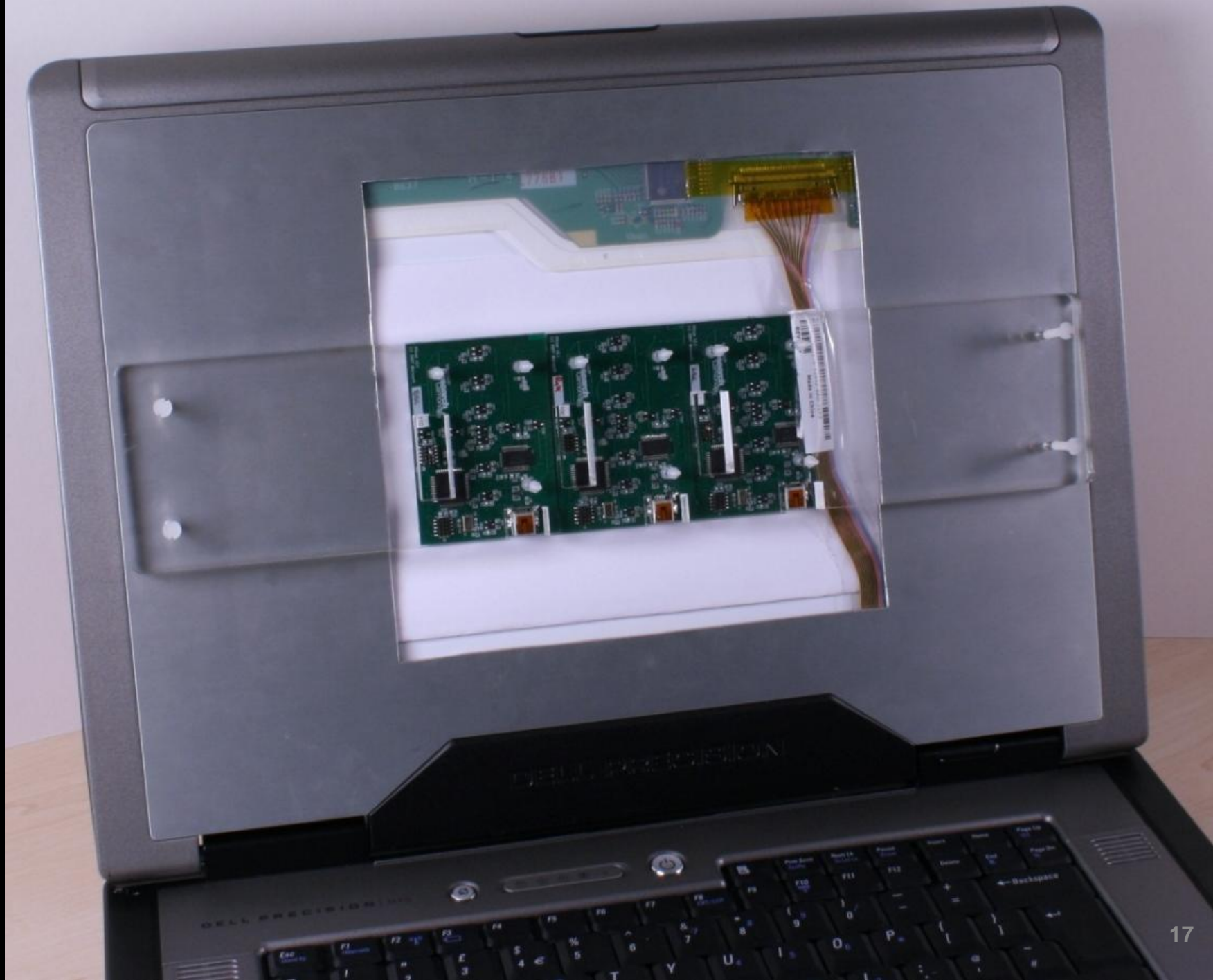
ThinSight:

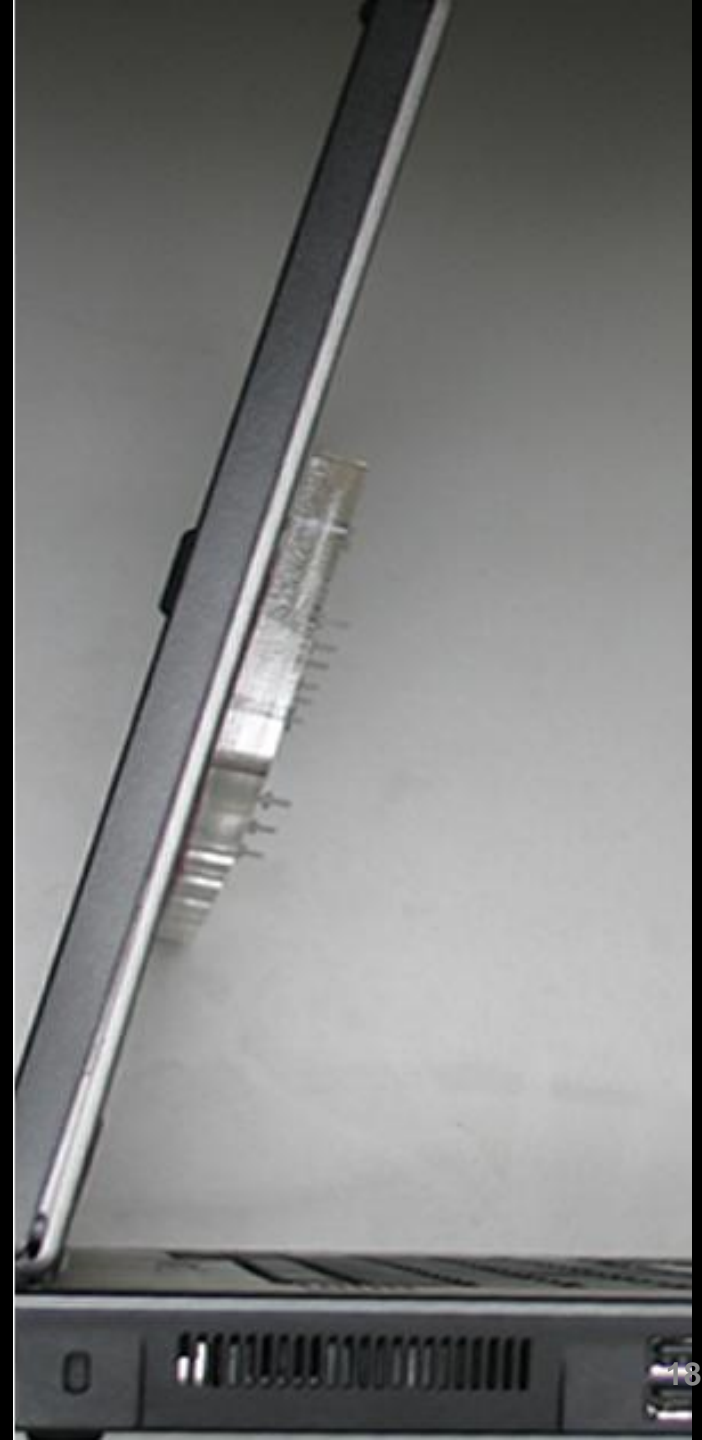
Thin form-factor surface computing







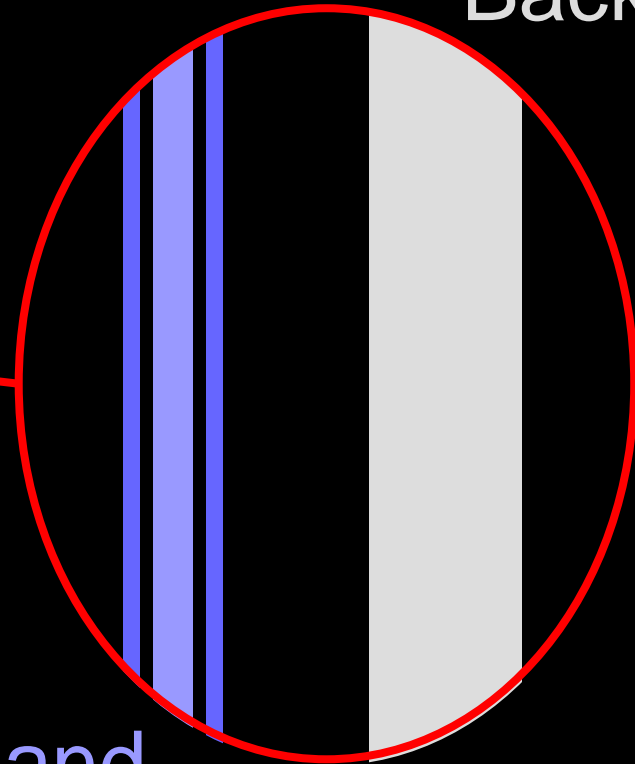








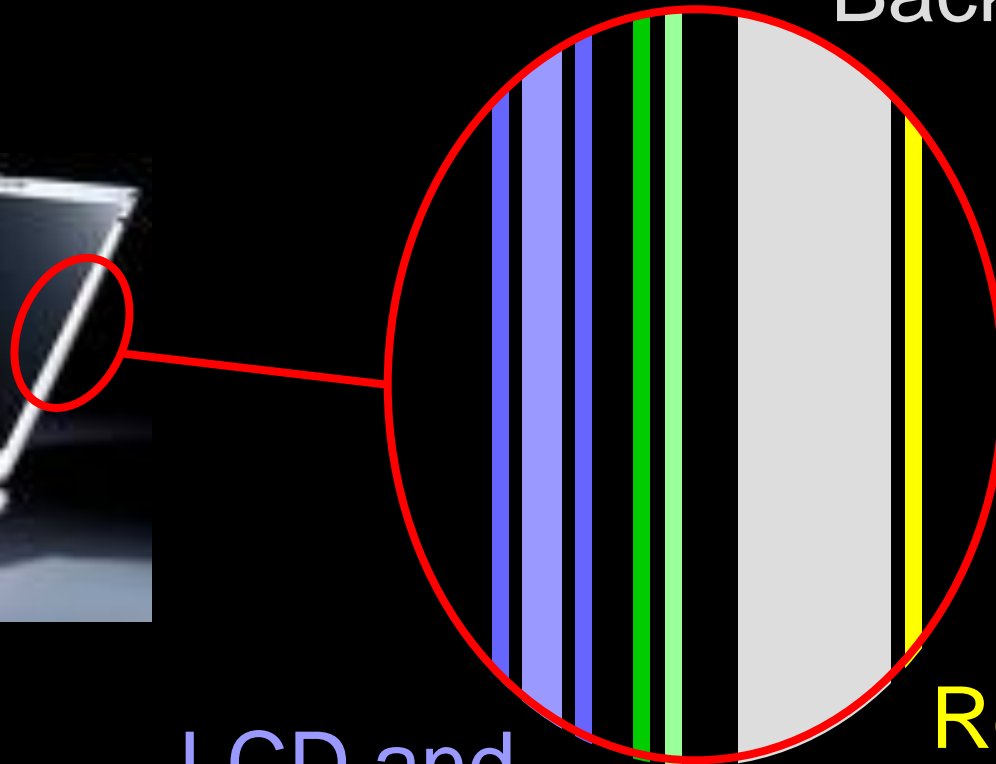
Backlight



LCD and
polarizers

Diffuser and brightness
enhancing film

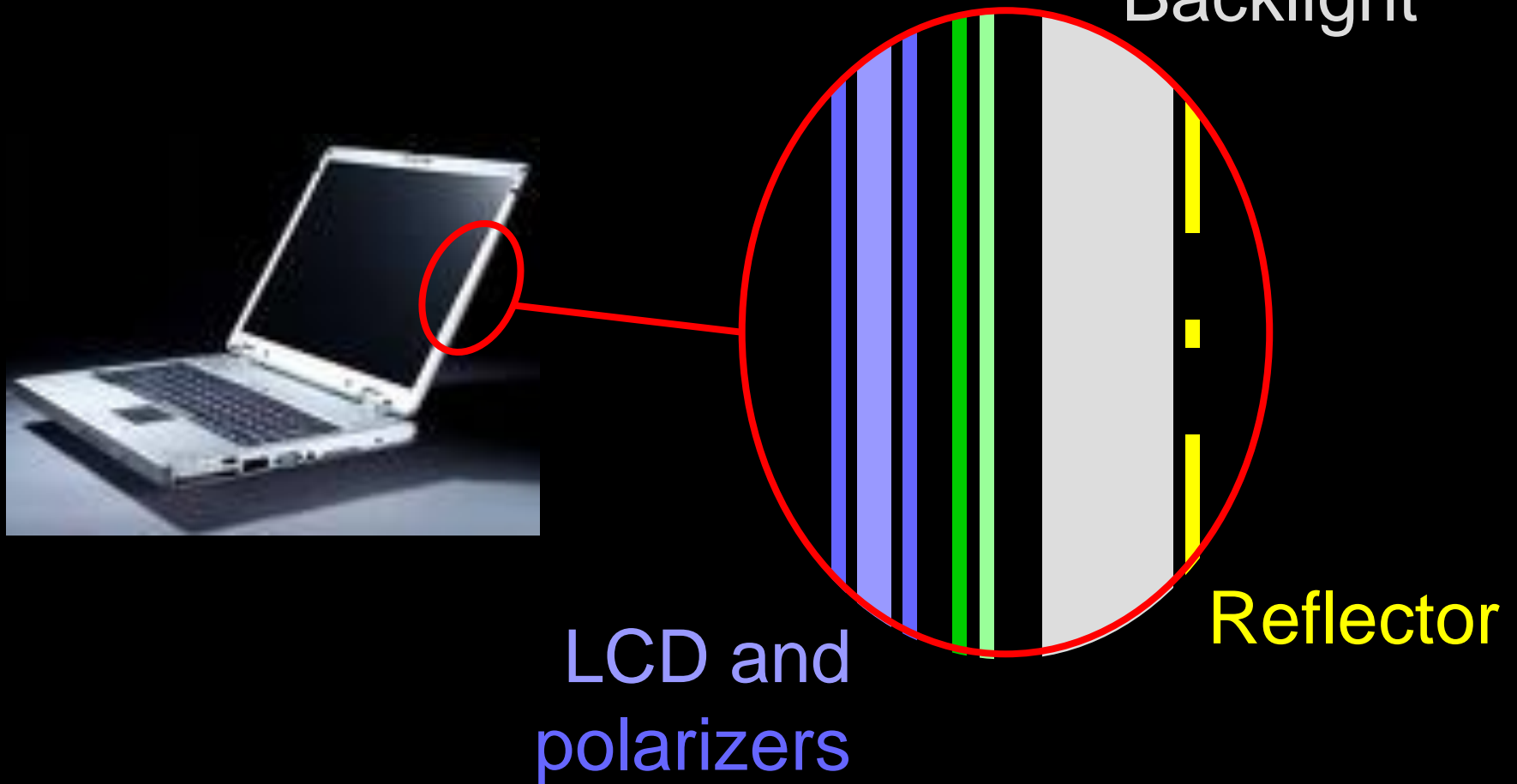
Backlight



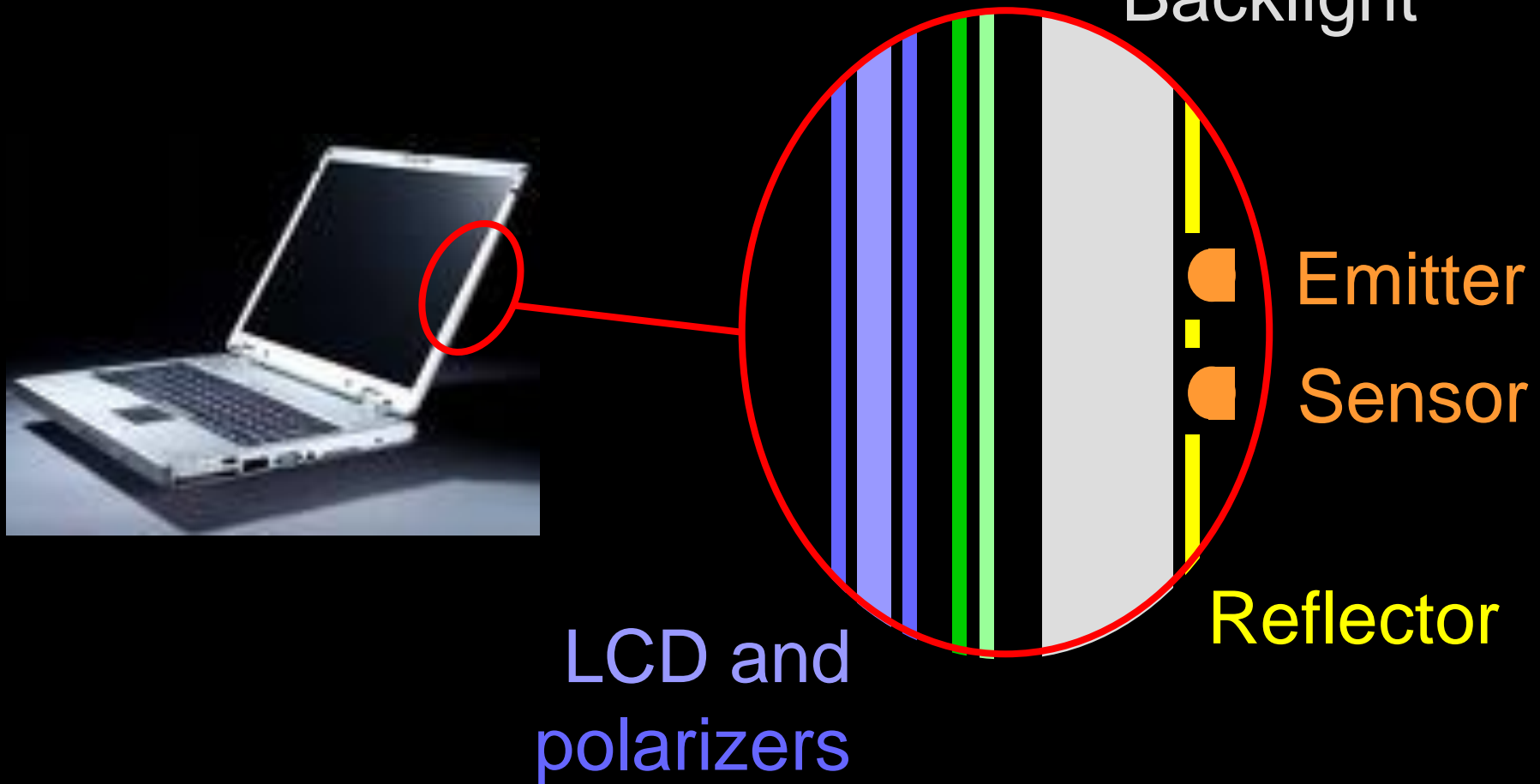
LCD and
polarizers

Reflector

Diffuser and brightness enhancing film

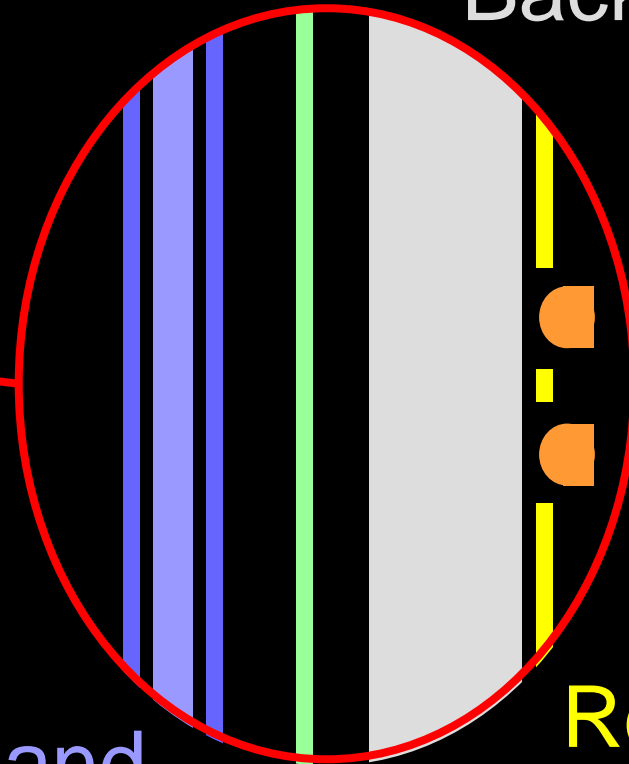


Diffuser and brightness enhancing film



Brightness
enhancing film

Backlight



Emitter

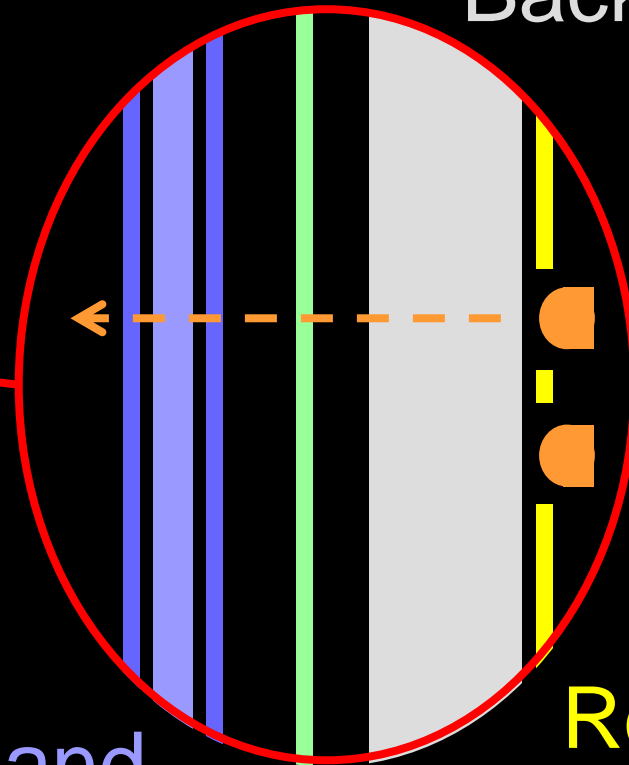
Sensor

LCD and
polarizers

Reflector

Brightness
enhancing film

Backlight



Emitter

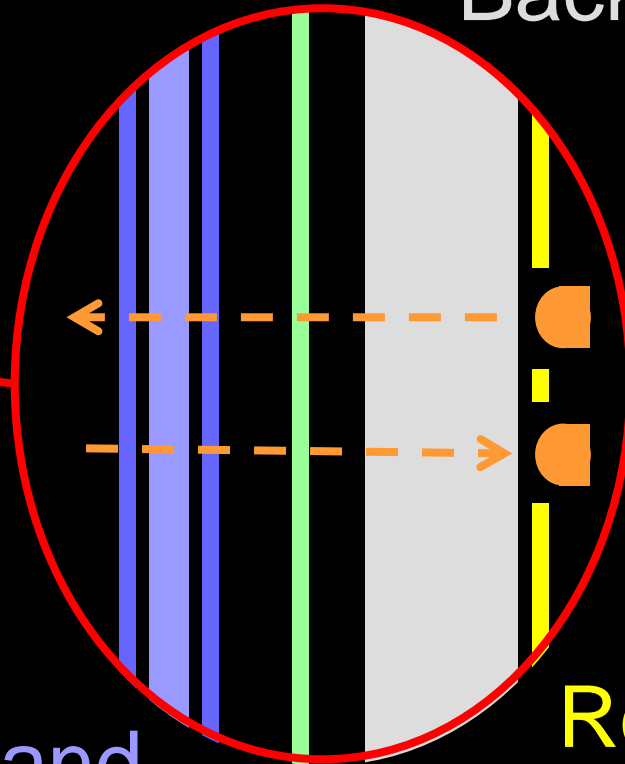
Sensor

Reflector

LCD and
polarizers

Brightness
enhancing film

Backlight



Emitter

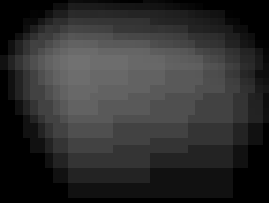
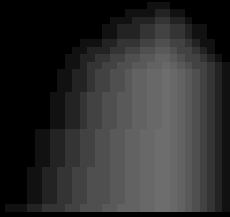
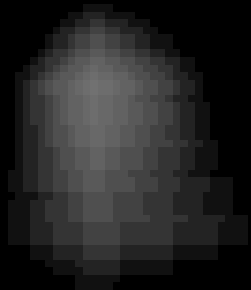
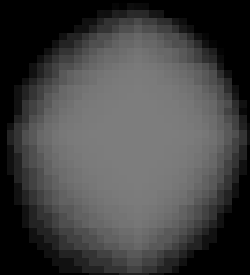
Sensor

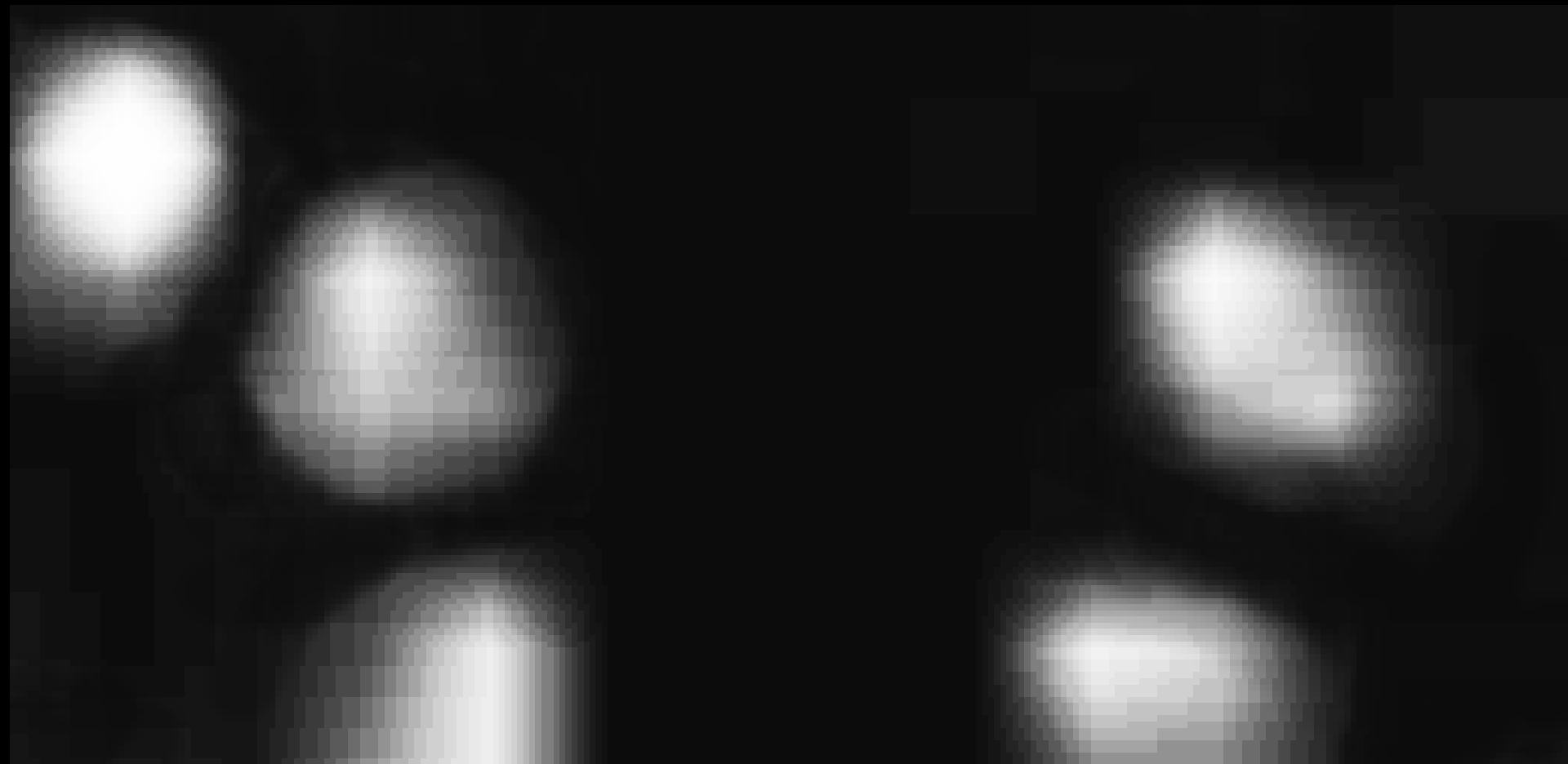
LCD and
polarizers

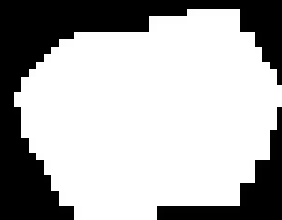
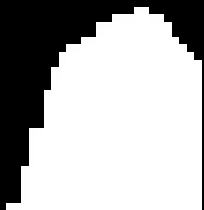
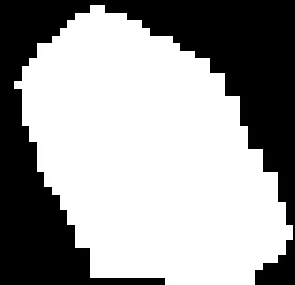
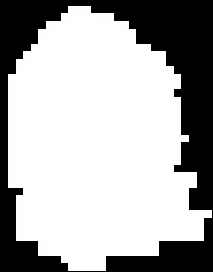
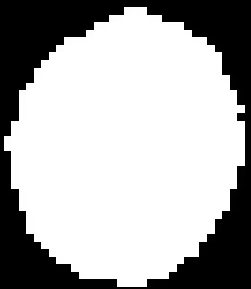
Reflector

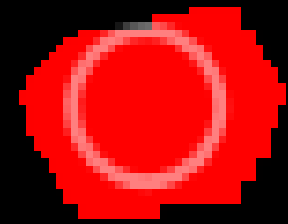
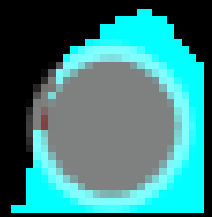
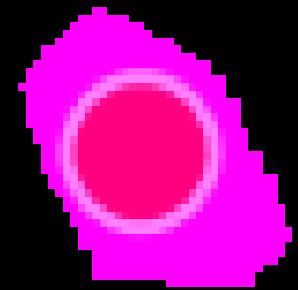
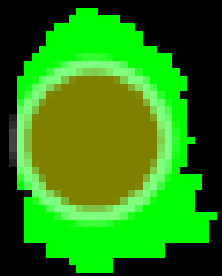
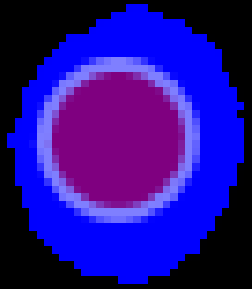














- Larger desktop LCD
- Full display sensing
- Horizontal form-factor



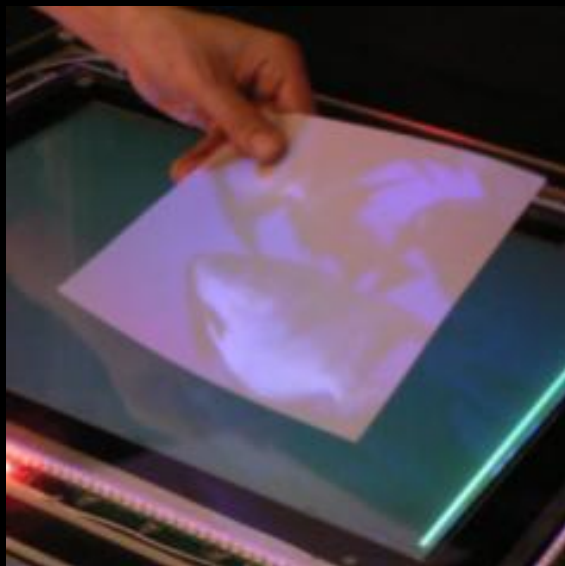


ThinSight surface video

Surface physics video

Surface Computing Research

SecondLight:
Interaction beyond the display





SecondLight video

Thank you