DVN Workshop
From Signaling to Messaging

Joachim Reill | 16th of January 2019 | Rochester, MI

Light is OSRAM

OSRAM
Opto Semiconductors

Some Statistics

You have the choice from ~ 2,5 million apps in Google Play Store
and ~ 2 million apps in Apple for iOS

1. For how many of those Apps did you pay on your smart phone ?

2. Why didn´t you pay for most of those apps ?

Digital Advertisement

Digital Advertisement

Worldwide market of advertisement:		> $600 billion
Digital Advertisement		> 50% share increasing
Facebook:	2017	~ $ 40“ Revenue ~ $ 20“ EBIT
Alphabet:	2017	~ $ 110“ Revenue ~ $ 26“ EBIT

Traditional vs. Digital Business

Traditional Business		Digital Business
Process centric	→	Customer centric
High latency	→	Low latency to real time
Cost focused	→	Outcome focused
Company controlled	→	Customer controlled
Multichannel	→	Omnichannel
Hard and slow to scale	→	Easy and quick to scale
Rigid policies based on distrust	→	Open, transparent and collaborative
Single function with siloed metrics	→	Integrated functions

Ten Ways Your Smartphone Knows Where You Are

1. GPS
2. Assisted GPS
3. Synthetic GPS
4. Cell ID
5. Wi-Fi
6. Inertial Sensors
7. Barometer
8. Ultrasonic
9. Bluetooth Beacons
10. Terrestrial Transmitters

➔ There is no way to escape digital advertisement

From Signaling to Messaging

RCL
Standards signaling

“Digital display door”

Display setup

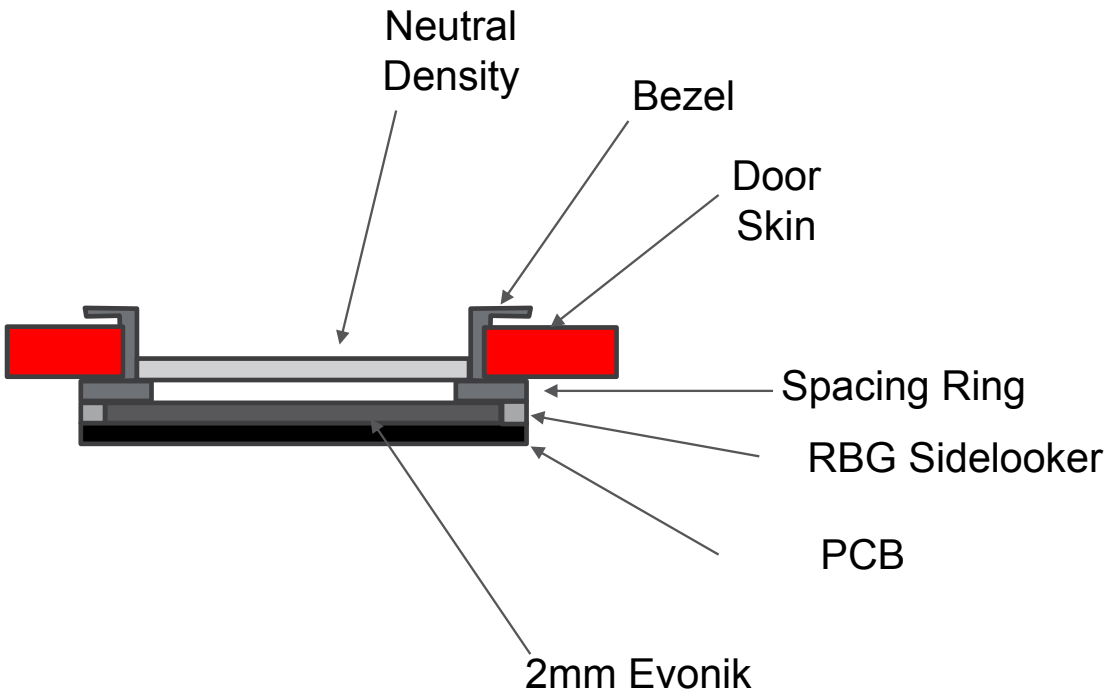
RCL

- 1 x 2 aspect ratio
- < 1mm pixel pitch
- RGB pixels
- > 28k pixel (RGB)
- Up to 6000nits for white

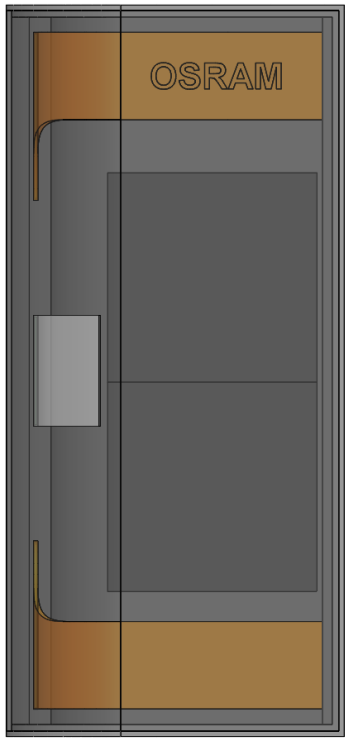
“Digital display door”

- 1 x 8 aspect ratio
- < 1mm pixel pitch
- RGB pixels
- > 115k pixel (RGB)
- Wide color gamut >90% sRGB
- Up to 6000nits for white

RGB Lit Element Construction



RCL



2x1 LED Display

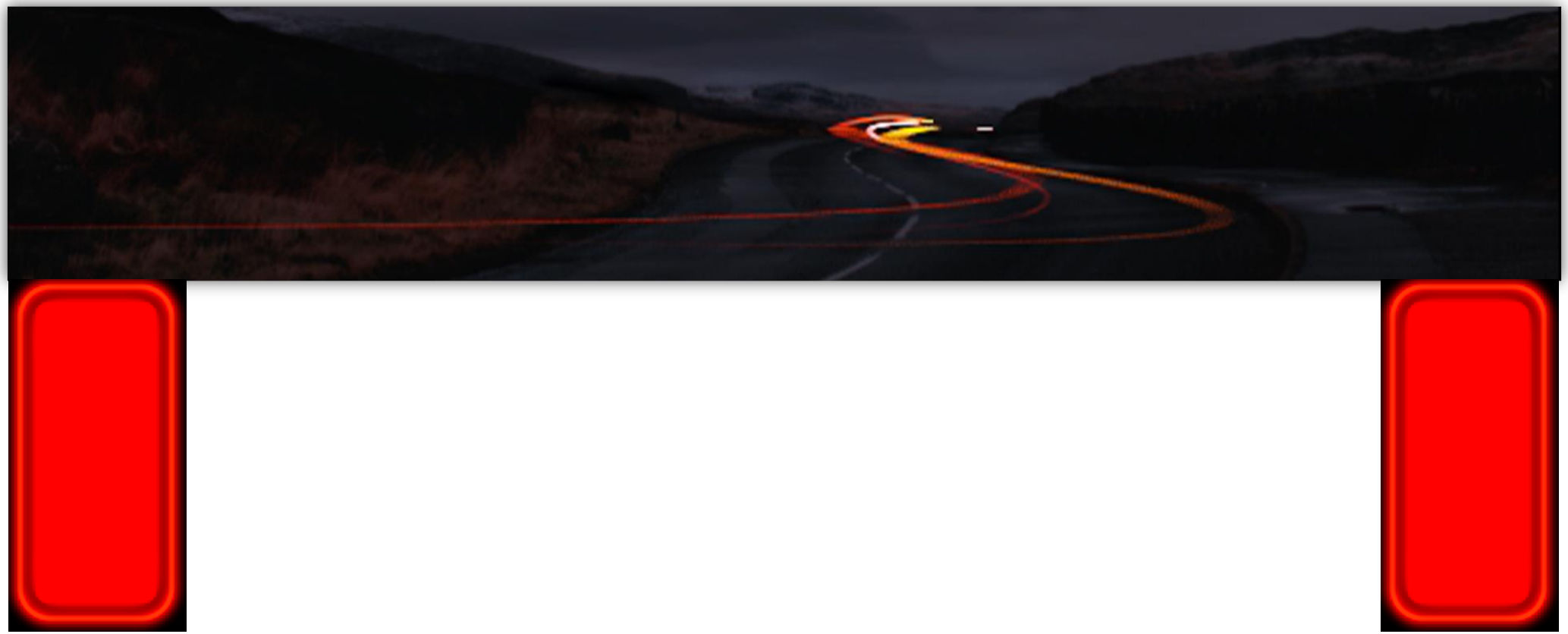
Features

- 2 Bi-color Lighting Elements for Stop, Tail, and Turn Signal
  - Uses Evonik Endlighten Material lit from 2 sides
  - SYNIOS P2720 – red
  - SYNIOS P2720 – yellow
- Back-up Function
  - Single Edge lit Evonik Endlighten
  - SYNIOS P2720 – white
- RGB LED Display
  - 120x240 overall resolution
  - <1.0mm pixel pitch
  - RGB Pixels
  - 5V input

Welcome: “Good Morning, Sam”

Your car welcomes you for a ride !

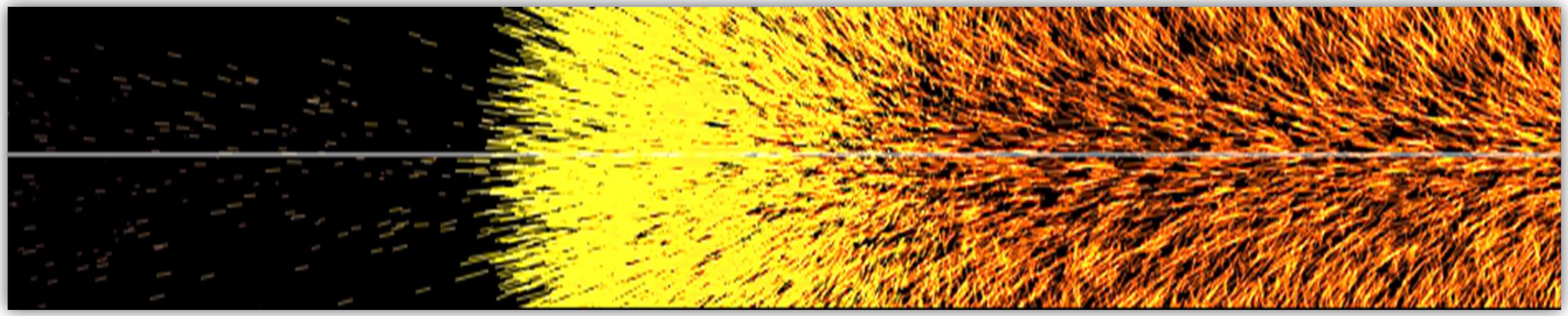
Driving Mode



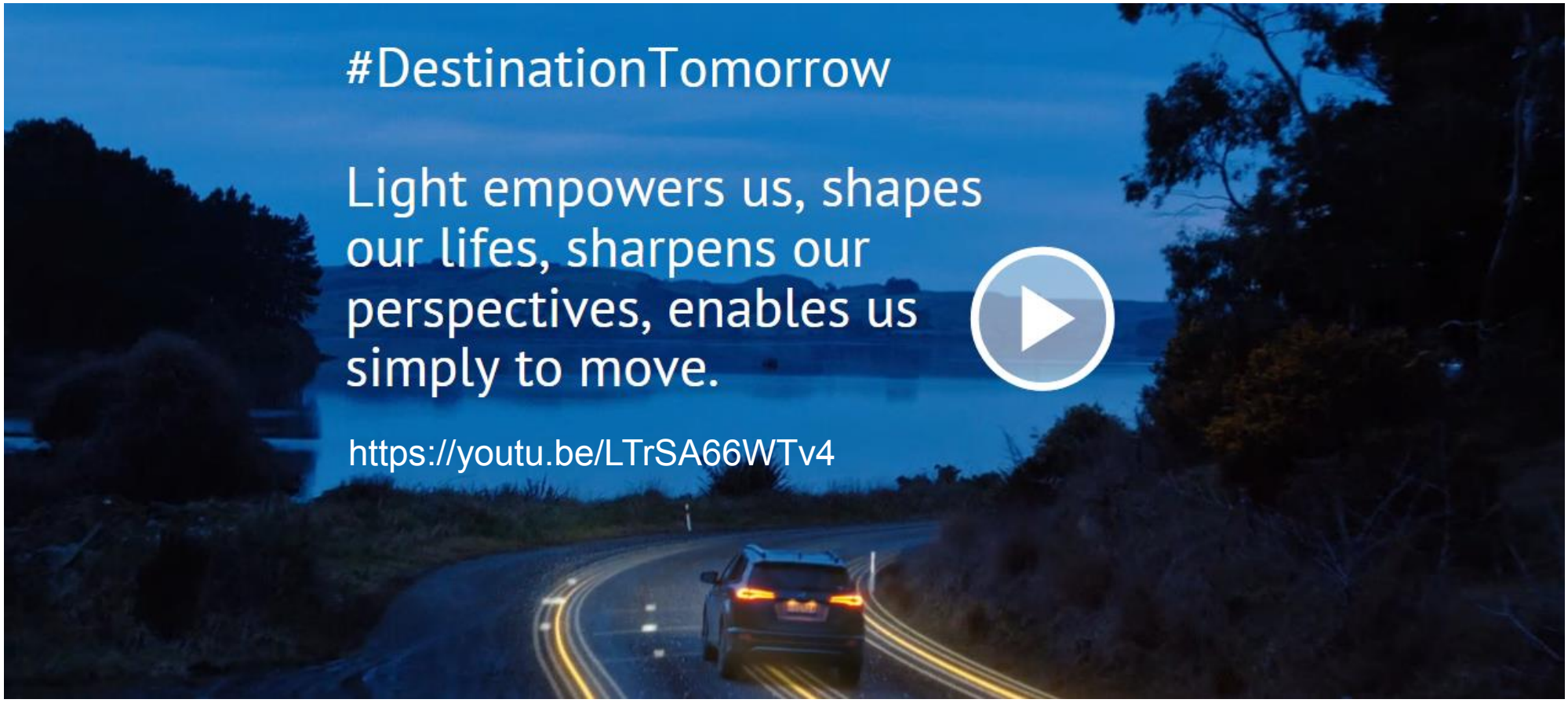
DVN Workshop Advertisement

Automated Driving Mode

Car locking



Destination Tomorrow



Many thanks!