

Eyewear for the Communications Age

“Functional vision, engagement, connectivity”



VM Summit March 13, 2013

Confidential and Proprietary

Not for Unauthorized Distribution

- Electronic eyewear will be big
- How does the Eye Care industry participate?
- eSight vision-centered starting point
 - Rx optics + electronics

Circa 1983



1990s

Pagers

PDA's

*Portable Video
Players*

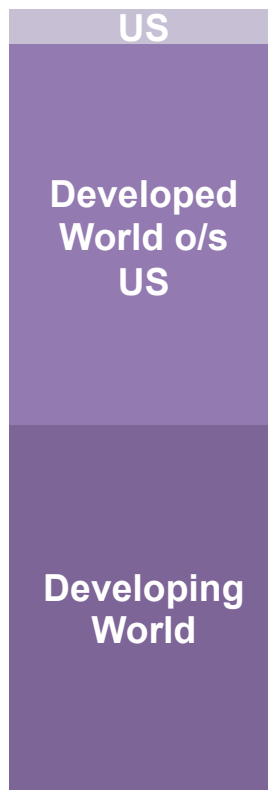
2013

*6 Billion cell phone
subscribers*





Low Vision Worldwide: 187 million people*



4.3%



In the US alone:

- There are 8 million “low vision” patients today...
 - Plus 500,000 more each year
 - Only 4.3% of global market
 - Does not include correctable cataracts or refractive error (i.e. glasses)
- Driven by an aging population and diabetes
- Costs re. productivity, health system & premature mortality = \$365B**
- Total addressable market in US for eSight (20:60 or worse) ~ >>\$10B***

* Source: “The Global Economic Cost of Visual Impairment”, AMD International, April 2010; 20:40 or worse
 ** Healthcare system costs - \$196B; Productivity loss (absenteeism) - \$40B; Premature mortality - \$129B
 *** 4.2 million worse than 20:60.

Circa 1983



1990s



2013



Micro Displays with Prism

Camera with optimized optical performance

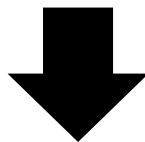


Bioptic tilt

Integrated spectacle lenses maximize vision and image quality

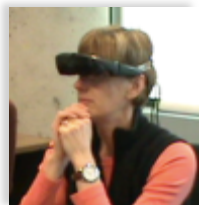
Low vision ≠ complete blindness

- Stimulate remaining retinal function with a better signal
- Manipulate photons so the damaged eye can “see” them
 - Change information in spatial, temporal, spectral domains*
 - Use the brain processing power to “fill in the gaps”
- Restoring “functional vision” (not 20:20 vision)
 - “Good enough” to see is perfect



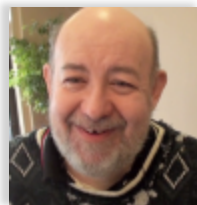
Ophthalmic-quality digital video eyewear

- For people with acuity between 20/60 and 20/400
- ~70% of patients who meet visual criteria achieve significant visual benefits
- Restores functional mobile vision – interaction with the world
 - Non surgical
 - Easy to operate
 - Immediate visual benefits



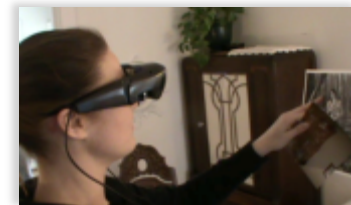
Stargardt's

"Everything is so vivid and real"



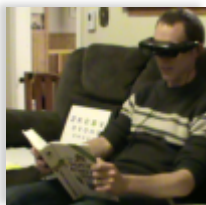
Diabetic Retinopathy

"This could get me back to work"



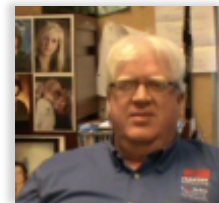
Stargardt's

"It's like my blindspot's not there!"



Leber's Neuropathy

"I haven't read a book since I was 8"



Ocular Albinism

"I can read the paper like normal people"



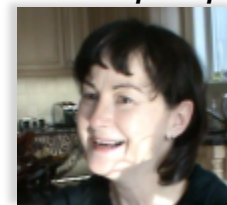
Stargardt's

"I would love to use this to paint again"



Stargardt's

"I haven't seen a movie like that in 15 years"



Stargardt's

"Snow falling was like lace"

**Customers say:
"You changed my life"**

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