



Fast-Tint Protective Eyewear



FY10 TechSolutions project

OPERATIONAL NEED

Problem:

Pausing to manually change fixed-tint ballistic eyewear lenses in response to differing lighting conditions (interior/exterior movement) during the conduct of combat operations is not practical.

Value to Warfighter:

Increased situational awareness and eye safety during transitions between light and dark environments

Impact if Not Addressed:

Operators compromise visual acuity when moving from light to dark spaces, or risk eye injury due to removal of eye protection

Submitter: N833 CIV at NAVSPECWAR



SOLUTION

The Technology:

A liquid crystal host containing dichroic dyes is sandwiched between two flexible plastic substrates coated with transparent electrodes, and applied to a lens.

- ANSI ballistic protection lens
- Tint change time < 0.5 sec
- Four colors: clear, dark gray, blue, amber
- Battery lasts 55 + hrs per charge

NRE Performer: NSWC Crane

Partners:
AlphaMicron, Inc
WSTIAC

BUSINESS CASE

Project Cost:
\$307K

Start date: Feb 2010
End date: Jan 2011

Status:

- 30 prototype pairs delivered January 2011
- NSW assessment through April 2011
- SOCOM funding 100 next-generation pairs for early 2012

Potential transition sponsor: NSW/USSOCOM

S&T Focus Area: Naval Warfighter Performance
(Warfighter Protection)



Fast-Tint Protective Eyewear

FY10 TechSolutions project



OPERATIONAL NEED

Problem:

Pausing to manually change fixed-tint ballistic eyewear lenses in response to differing lighting conditions (interior/exterior movement) during the conduct of combat operations is not practical.

Value to Warfighter:

Increased situational awareness and eye safety during transitions between light and dark environments

Impact if Not Addressed:

Operators compromise visual acuity when moving from light to dark spaces, or risk eye injury due to removal of eye protection

Submitter: N833 CIV at NAVSPECWAR



SOLUTION

The Technology:

A liquid crystal host containing dichroic dyes is sandwiched between two flexible plastic substrates coated with transparent electrodes, and applied to a lens.

- ANSI ballistic protection lens
- Tint change time < 0.5 sec
- Four colors: clear, dark gray, blue, amber
- Battery lasts 55 + hrs per charge

NRE Performer: NSWC Crane

Partners:
AlphaMicron, Inc
WSTIAC

BUSINESS CASE

Project Cost:
\$307K

Start date: Feb 2010
End date: Jan 2011

Status:

- 30 prototype pairs delivered January 2011
- NSW assessment through April 2011
- SOCOM funding 100 next-generation pairs for early 2012

Potential transition sponsor: NSW/USSOCOM

S&T Focus Area: Naval Warfighter Performance
(Warfighter Protection)