

Vision Algorithms Catch Defects in Screen Displays



Ames Research Center

**Radiant Zemax LLC
Redmond, Washington**

NASA Technology

- ◆ As a part of its goal to enable the human exploration of the cosmos, NASA's Human Systems Integration Division at Ames focuses on how human beings interact with systems
- ◆ A senior researcher on the team created an algorithm that optimizes robotic vision technology

Partnership

- ◆ The Standard Spatial Observer (SSO) algorithm is a simplified model of human vision that focuses on how contrast is perceived by the human eye
- ◆ Radiant Zemax, a company that provides display-testing systems, wanted its imaging colorimeter to "see" screen defects as a person would
- ◆ The company licensed the SSO from NASA and integrated it into their software



Benefits

- ◆ TrueMURA provides an objective classification of screen defects using the industry-standard just noticeable difference (JND) scale
- ◆ The company's tools are deployed on hundreds of production lines and have inspected millions of TVs, phones, laptops, and tablets