



LANTERN



**Protect what's
important**

Peter Carnes

Lantern Vision Systems

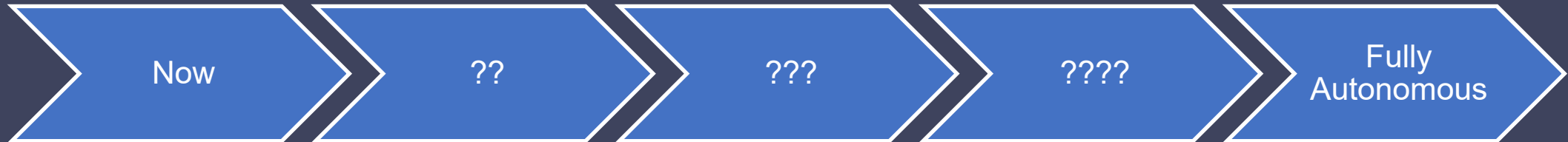
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CAV Working Group 17 April 2023

Thematic Promises of Connected Vehicles

- Environmental
- Convenience /Access
- Safety
- Data for Decision Making

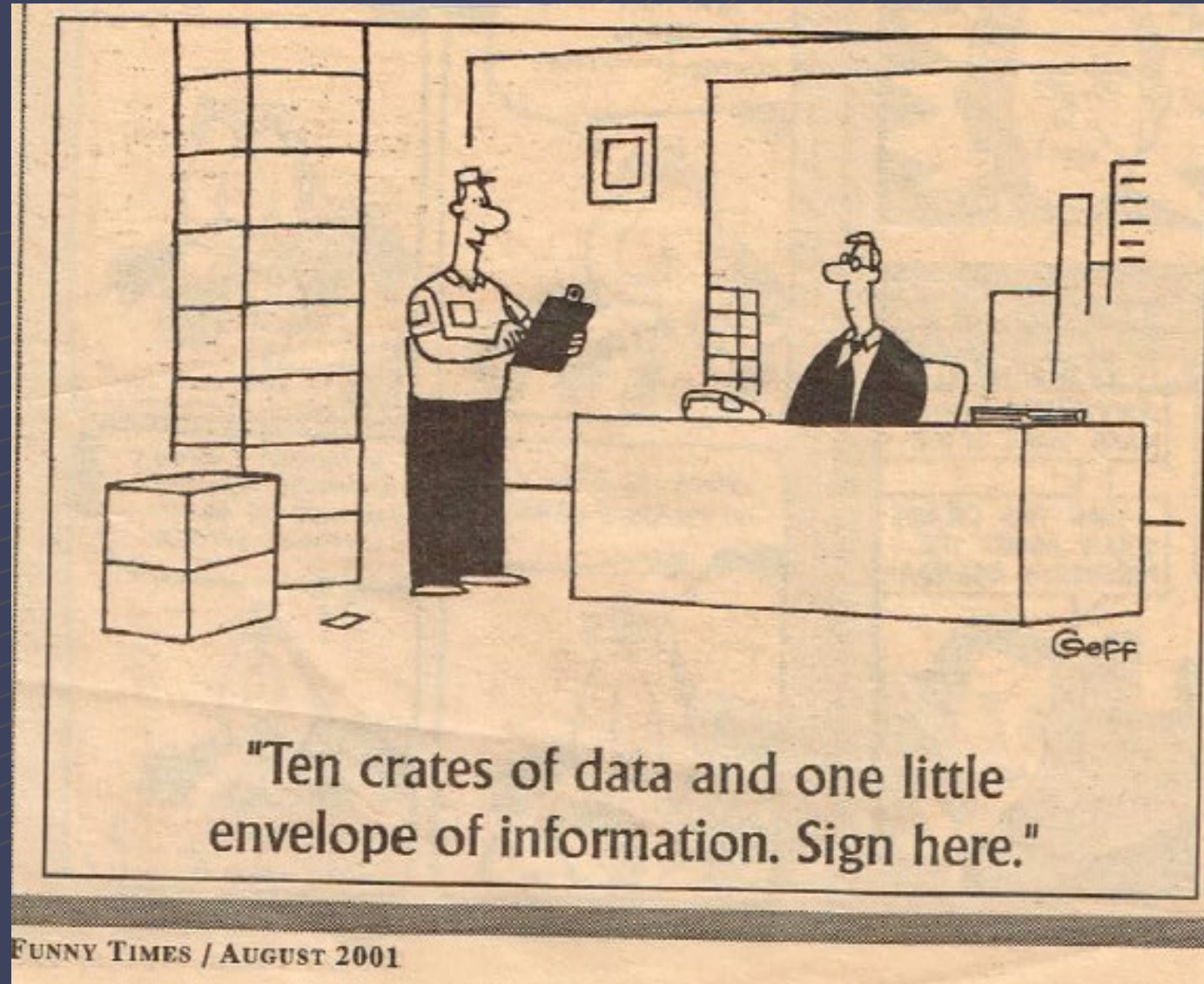
Timeline





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ROADZ
Roadside Active Defense Zone
ARMOR





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Nearly 80 percent of crashes and 65 percent of near-crashes involved some form of driver inattention within three seconds before the event.

National Highway Traffic Safety Administration (NHTSA) and the Virginia Tech Transportation Institute (VTTI) 20 Apr 2006

<https://vtx.vt.edu/articles/2006/04/2006-237.html>



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Active Defense Zone

Concepts

- Organizing Idea
- Enabling Technology
- Bespoke

- Uncomplicated

Importance

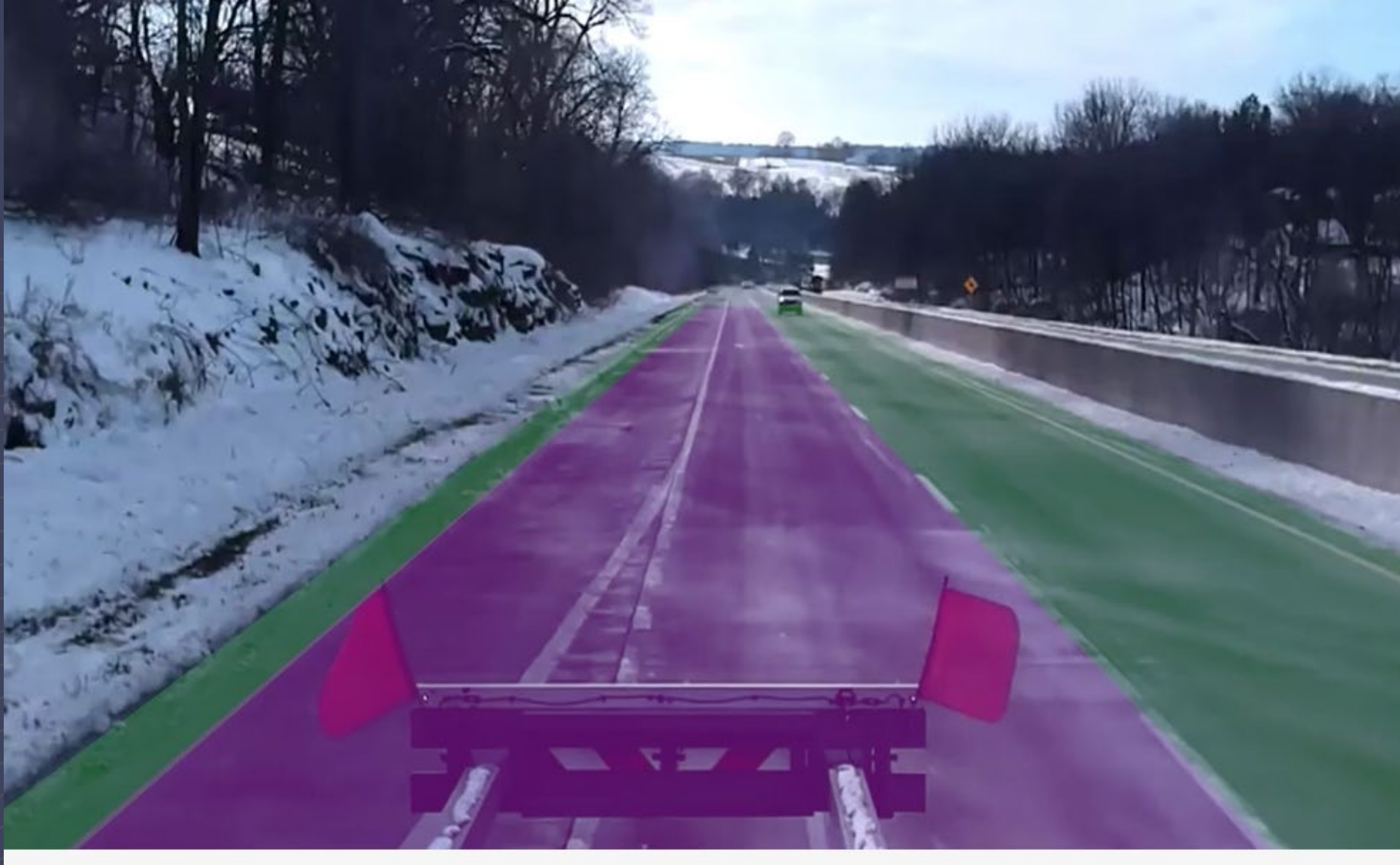
- Guide development
- Supports many Use Cases
- Must fit the deployed environment

- Operational reliability built in



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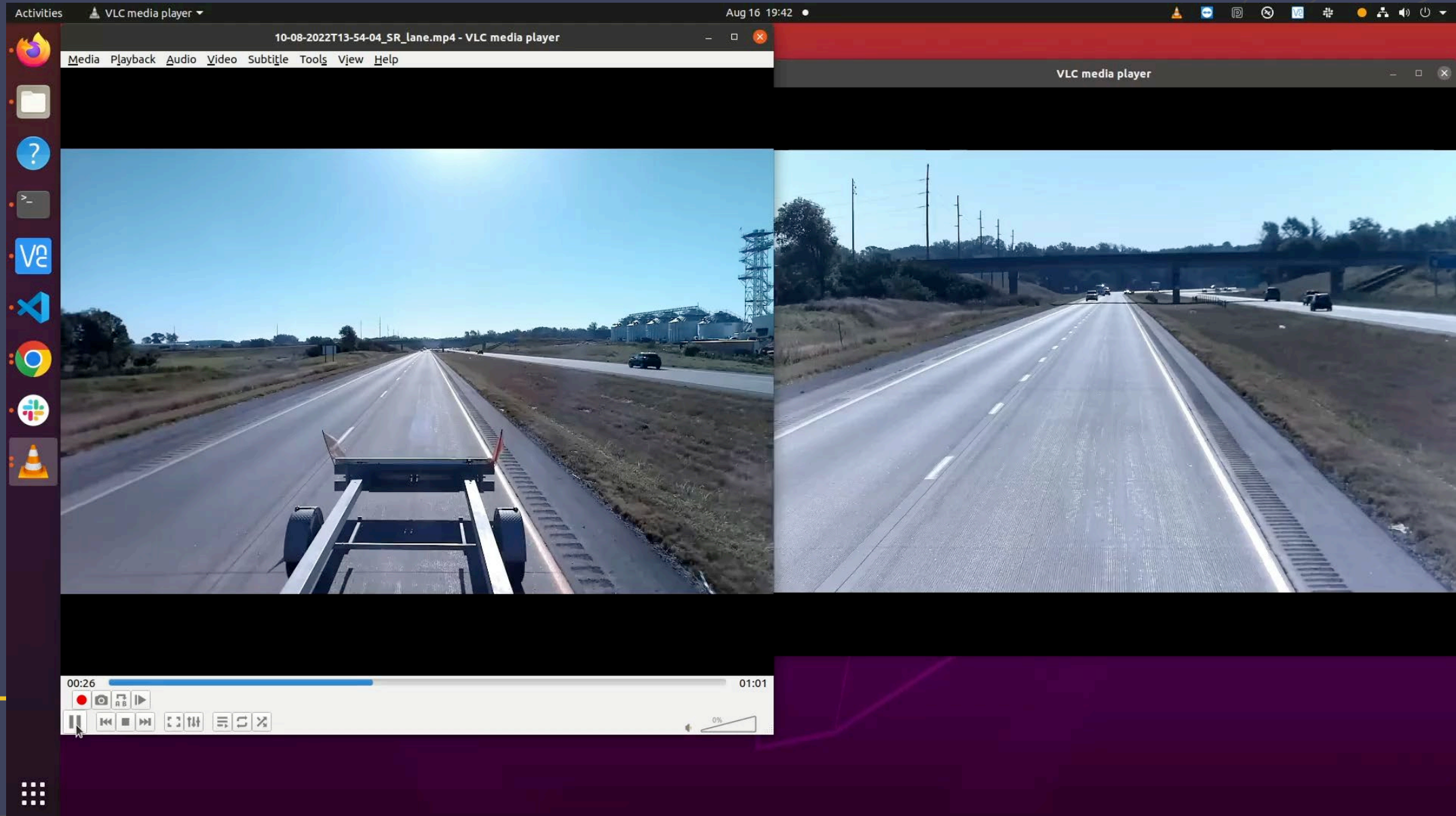


Green is pavement

Active Defense Zone

Short-range video

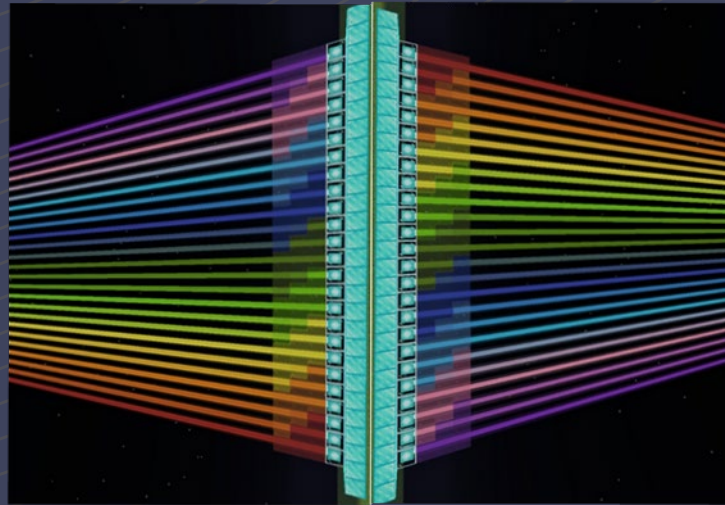
Long-range video





Get Facts > Create Info > Communicate!

- Video
- Radar
- Basic Safety Msg
- Lidar
- Other



Active Defense Zone Software

- Visible Alert
- Audible Alert
- TIM Message
 - Moves with Device
 - On only when active



Near miss and Crash Data

VRU Safety

Use Cases

- Mobile Operations
- Work-zone Operations
- ID Ped / Bicyclist in any Video

VRU Types

- Workers & drivers
- All

Questions?

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