Digital Fire Detection and Monitoring: Interoperable Camera Systems in OR

Modern fire response is enhanced by many technological tools, including real-time digital fire cameras and software systems. Collaboration in Oregon is ensuring interoperable construction and operations of these systems.

The **State of Oregon has experienced increasingly extreme wildfire seasons with devastating impacts, both rural and urban**. In response, Oregon has shown a commitment to mitigation and response strategies. As we continue to discuss policies and consider investment strategies, **statewide and interagency coordination for wildfire detection cameras is essential** to the success of these mitigation and response efforts. In previous years, asynchronous coordination between systems and agencies had been occurring as needed. In **February of 2022**, at the request of the Governor's Office, an interagency committee was formed to formalize and solidify collaboration, transparency and information sharing across camera platforms and with new partners in viable and vibrant participation.

The <u>Oregon Wildfire Detection Camera Interoperability Committee</u> is tasked with providing leadership and recognizing the value of all camera detection systems within an overarching and coordinated statewide system.

- <u>Mission:</u> build relationships in operator and user spaces, increase wildfire detection camera interoperability and resilience, ensure cross jurisdictional/cross-governmental communications and cooperation, and identify and implement best practices across the all-risk emergency operations ecosystem.
- <u>Vision:</u> Develop the most integrated and interorganizational wildfire detection system in the United States that provides immediate statewide access for the most efficient and effective emergency response, thereby ensuring the quality of life and protection of resources in Oregon.

Notable Recent Investments:		
$4.5M	UO	2022, **State of Oregon** HB5202
~$3.3M	ODF	2021, **State of Oregon** SB762, **Federal**, **Private** investments
~$1.5M	UNR-UO	2017-2022+, **BLM**

Overview of OWDCIC: <u>Committee foci:</u>

- **Capture current state** of systems and presence in Oregon via **regular updates**
- Discovery and identification of approaches for **coordination and collaboration for multi-capacity uses**
- **Identify efficiencies** in detection camera policy, technology, funding sources and to build and leverage interagency relationships.
- Coordination to **achieve common outcomes** to navigate multiple solutions to a complex issue.

Mitigating a Growing Threat Using Proven Technologies: Real-time detecting and alerting technologies increase the effectiveness of fire response and management. 120 cameras in Oregon are currently in operation with more to come. Detection and monitoring are complemented by software and communication platform workflows.

Committee composition: *Governor's Office, Public Safety Agencies, Structural Fire Agencies, Utilities, Emergency Managers, USFS, BLM, Statewide Interoperability Coordinator, Oregon Hazards Lab @ UO, Oregon Department of Forestry, Tribal Representation*

Value of multiple camera systems

Each camera system offers unique strengths and proven operational track-record:
- o **Leveraging funding sources**: State and federal agencies, universities and utilities have unique access to different funds applied specifically to system uses and missions. Multiple systems lead to unique funding opportunities.
- o **Land-owner compatibility:** Use-cases differ amongst specific locations; different systems are better suited to specific needs of monitoring based on jurisdictions and response solutions.
- o **Software features:** Select solutions for detection, feeds to dispatch centers, public access to imagery, integration with common databases. Multiple systems drive innovation through open competition.

Examples of Systems in Operation:
- Since 2007, **ODF** operates the **EVS ForestWatch** platform for smoke detection to inform initial attack on state-protected and adjacent federal lands. **68 camera sites** are monitored at **five detection centers** located across the state with access to immediate response of ground and air resources. Sponsorship is primarily landowner or state general funds but includes federal and non-profit grants.

- Initiated in Oregon in 2018 under a BLM Financial Assistance Agreement, **UO** operates the **ALERTWildfire** platform to provide first-responders with PTZ access at **30 camera sites.** On-demand time-lapse are presented on a public-facing website. Camera sites are driven by sponsor needs and **placement within a broader multi-hazards data network**.

- In 2022**, 26 camera sites** driven by **Pano.ai** were installed, featuring a multi-camera system with a.i.-enabled smoke detection at. Pano supports wildfire response teams to enhance detection, confirmation, monitoring, and alerting.

Table of OWDCIC foci:

Issue/Category	Successes	Challenges
Installs Growth	- Increased viewshed coverage - Wider use of products	- Ongoing O&M, co-location, permitting - Connectivity (Starlink, other IPs)
Detection Confirmation	- Early detection and efficacy - Unique alerting through monitoring and AI systems	- Development of a common operating platform - Integration vendor proprietary data between systems
Camera usage	- 5 EVS detection centers - Public website for AW - Pano detection dashboard	- Develop monitoring solution for all platforms - Increase public awareness
Dispatch Communications	- EVS-ODF-Dispatch workflow - Public availability of AW - Access to camera imagery and data to first responders	- Need to establish protocols and solutions for all platforms to be tied to initial attack response - Increase interaction w/ PSAPs, ORAlert

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