

Smart Camera Networks & Target Tracking

Inventor

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STAGE OF DEVELOPMENT

Prototype system

INTELLECTUAL PROPERTY

US Patents 7,421,113 & US
7,522,765, additional application
pending

DESIRED PARTNERSHIPS

License
Co-development

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Problem

The rise of small, networked devices means that cameras are now cheaper and easier to deploy than ever before. A network of cameras could track objects by establishing where targets are moving in each camera's field of view. However, without a way to know where cameras and their targets are in relation to each other, it is difficult to accurately track an object.

Solution

Researchers at the University of Pennsylvania have developed a way to localize smart cameras and track objects. Cameras that are in each other's field of view can communicate with each other by sending pulsed infrared signals. Information about the camera position can be determined and the location of tracked objects can be established through triangulation. Using this technique, a network of cameras can communicate with each other and establish their spatial orientation to track moving objects. This technology could be used to create smart surveillance systems that can track targets spread across a building or a larger area.

Advantages

- Establishes spatial orientation of cameras relative to each other
- Targets can be tracked as they move from one camera's field of view to another
- Allows for smart, networked surveillance systems.