



Passive Ranging

Deep Vision's data abstraction technology delivers real-time passive ranging.

Deep Vision's novel concept of data abstraction quickly transforms abundant sensor data into a form that is easily classified and efficiently analysed.

The abstractions, created from the raw sensor data, are used to recognise the objects of interest. The abstractions for these objects, coupled with their size on the sensor and knowledge of the object's true size, provides the information required to passively gauge the line-of-sight distance to each of the objects.

Further to this, utilising the rate of which the sensor data is acquired (i.e. Frame rate), the relative bearing for each of the objects is ascertained. This includes:

- Velocity
- Acceleration
- Azimuth and elevation

Deep Vision's data abstraction technology operates with a throughput of 100+ frames per second.

Exploitation Value

- Operator Assistance
- Target tracking and seeking
- Motion Analysis and Prediction
- Distributed self/group awareness
- Autonomous/Assistive landing and positioning
- Station keeping

Input Requirements

- Archived videos and image sequences
- Real-time acquisition from visual, thermal, or sonar sensors.

Deep Vision, Inc.

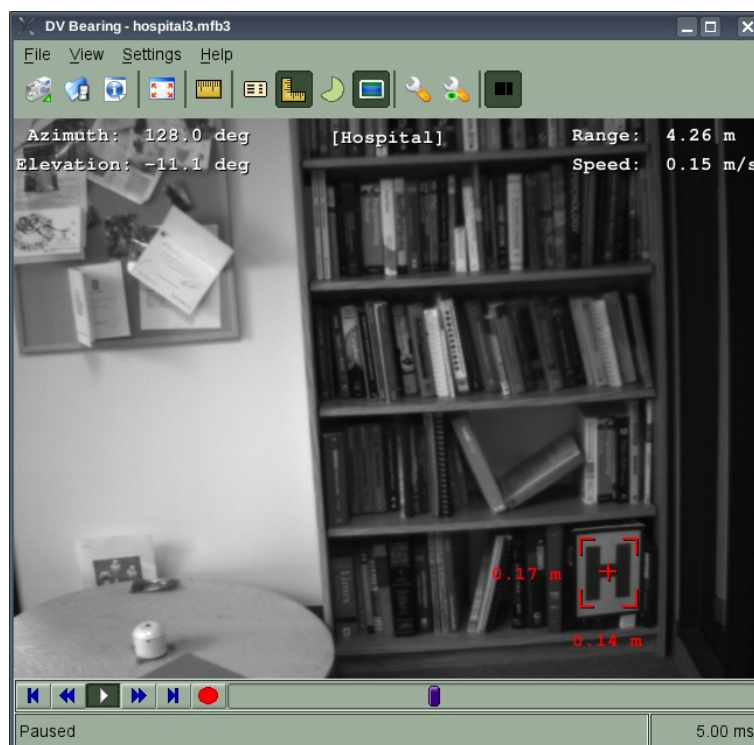
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Operating Facts

- Operating System: Any (*GNU/Linux recommended*)
- Hardware Requirements: *None*
- Sensor Modalities: *Visual, Thermal, Sonar*
- Timings[†]: 100+ FPS
- Runtime Memory Requirements[†]: 300 KB
- Storage Requirements[‡]: 1.1 KB

[†] Typical. Based on a 640 x 480 data set

[‡] Typical. Based on 45 abstractions (avg. 25 symbols each)



Features

- Tracking multiple objects in 3D
- Operates in complex and cluttered environments
- Content-based 3D motion analysis
- No active signals.

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