Auto-Targetting in a Remote Sentry Turret
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- **Video Processing**
  - A feed of the camera output appears on the screen.
  - Store frames in ZBTs and create changed-pixel map through comparison of frames.
  - Show changed-pixel map overlaid on camera output

- **Motion Detection**
  - Vertical and horizontal histograms based on changed-pixel map.
  - Center of mass calculations return pixel location to target.

- **Movement**
  - In auto-target mode:
    * Camera reacts to motion.
    * Laser tracks and lights single moving body.
    * Laser tracks and lights one of multiple moving bodies.
  - In user-guided mode:
    * Laser follows mouse.
    * Laser lights real-world targets clicked on-screen.
  - With range input:
    * Laser is biased upwards a compensatory amount - small for short ranges, larger for long ranges.

- **User Interface**
- Mouse tracking and location storage.

- Select movement mode: auto-target or user-guided.

- Feedback when target is chosen through mouse click.

- Show box-of-interest on video feed.