

operator within the aircraft. Most FLIRs have several field-of-views ranging from wide swath mode to narrow swath. An important characteristic of the FLIR is its ability to retain a high spatial resolution in the narrowest field-of-view. This is very important when the monitoring of the movements of objects on the ground is required.

Development, Acquisition or Production, and Stockpiling

Thermal infrared imaging sensors, when utilized at night after solar cooling has occurred, would be effective in identifying sources of heat that would be indicative of human activity. Heated or air conditioned buildings would be discernible using thermal imaging systems, as well as buried heating distribution lines and warm vehicular activity. FLIR systems, using their controllable pointing capability, would be useful in monitoring personnel movement from building to building within a specific facility. The oblique viewing characteristics of FLIRs would enable the imaging of the sides of buildings and activity associated near or around (but not inside) an enclosed facility. FLIRs would record on videotape, or transmit directly to a ground receiving station in real-time the data being collected including positional and time information for archiving purposes.

Radar Systems

Imaging radar systems are unique in their capability to provide useful information under conditions when other sensors are rendered useless because of adverse weather or absence of light. Microwave radar systems are considered active sensors, in that they illuminate the terrain by a series of carefully timed microwave pulses of pre-set length. The reflection of these microwave pulses from the terrain is recorded on the aircraft. It is the reflection capabilities of specific targets on the ground that determine radar imagery characteristics.