

information. Ancillary information such as positional information and time/date can be overlaid on the CCD image for cataloguing purposes.

CCD imaging systems have similar restrictions to those for normal photographic cameras. Their use is restricted to the daylight hours in relatively good weather conditions. There are CCD systems which can operate in low light level conditions but their resolution characteristics are reduced as a result. CCD data is recorded digitally, however, and has the capability of being manipulated for interpretation purposes by computers.

The evolution of CCD camera systems has led to the development of long range optical photography (LOROP) systems. These cameras can produce very high resolution imagery from a considerable stand-off distance from the target. The average cost of three to five million dollars per system, however, may be a prohibitive factor.

Multispectral camera systems, one form of electro-optical sensor, consist of electromechanical linescanning devices or pushbroom scanners. Several channels of multispectral data can be recorded or viewed simultaneously. These scanning systems can image and record very narrow spectral wavelengths, a feature that is particularly useful when imaging camouflaged targets. The data reduction and image processing required to produce imagery from these sensors can be a complex operation requiring radiometric and geometric corrections.

Resolution from airborne optical sensors is determined mainly by the altitude of the aircraft platform during data acquisition. A spatial resolution of 0.15 cm is obtainable from flying heights of 305 to 915 m above ground level.