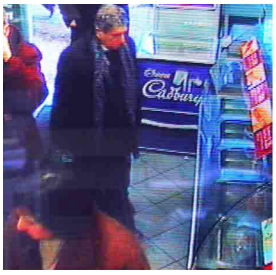
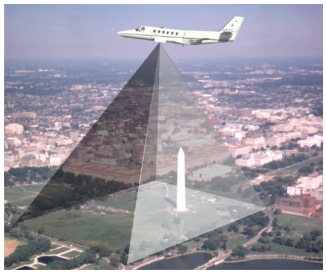
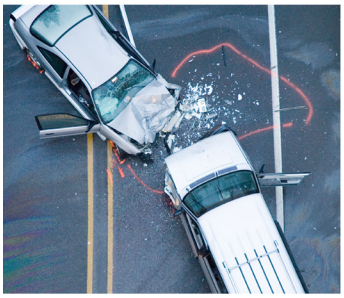
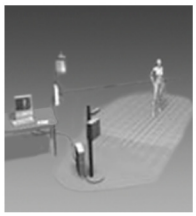
National Aeronautics and Space Administration

John F. Kennedy Space Center

Scene Analysis System



The National Aeronautics and Space Administration (NASA) seeks partners interested in the commercial application of the Scene Analysis System. This system allows crime scene and accident scene investigators to accurately measure objects within a digital camera image capture. The system uses a commercial off-the-shelf digital camera, a photogrammetry calibration cube, and 3-D photogrammetry processing software developed at Kennedy Space Center. The original version of the software was used during the Space Shuttle Columbia accident investigation to analyze film and video images that showed a single chunk of external tank (ET) foam debris falling from the bipod ramp area and colliding with the lower leading edge of the Shuttle's left wing.

BENEFITS

- Calculates distance between user-specified points
- Processes any number of reference targets
- Processes any number of camera images
- Provides user-friendly edit features, including zoom in/out, translate, and load and unload
- Incorporates a routine to mark reference points with a "Find" function, while comparing them to the reference point database file
- Features a simple function to connect point pairs used to calculate linear distance
- Produces a comprehensive output report in html format

technology opportunity

www.nasa.gov

APPLICATIONS

- Forensics
- Insurance
- Security
- Photogrammetry

TECHNOLOGY STATUS

- ☑ Patent pending
- ☐ U.S. patent
- ☑ Copyrighted
- ☑ Available to license
- ☐ Available for no-cost transfer
- ☐ Seeking industry partner for further codevelopment

Technology Details

To conduct analysis of a scene, the investigator places the target cube marked with premeasured targets in the area to be photographed. Using a digital camera, the investigator shoots images of the area from at least two different angles, making certain to capture the cube in the field of view. The two images are loaded onto a computer and the investigator clicks on the same targets on the cube in the two images. The software then three-dimensionally calculates the size of other objects within the image and provides a report in html format.

Partnership Opportunities

NASA has acquired the copyrighted the Scene Analysis System and has applied for a U.S. patent on the system. NASA is seeking licensees of the patent and copyright. NASA has the authority to grant licenses on its domestic and foreign patents and patent applications pursuant to 35 U.S.C. 207-209. NASA has implemented this authority by means of the NASA Patent Licensing Regulations, 37 CFR § 404. All NASA licenses are individually negotiated with the prospective licensee, and each license contains terms concerning commercialization (practical application), license duration, royalties, and periodic reporting. NASA patent licenses may be exclusive, partially exclusive, or nonexclusive. If your company is interested in the new Scene Analysis System technology, or if you desire additional information, please reference Case Number KSC-13060 and contact:

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