



Right of Way Imaging



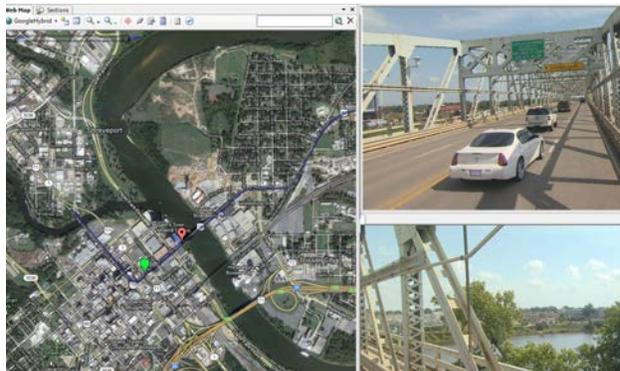
Right of Way Perspective Images

Fugro's ARAN (Automatic Road Analyzer) may be outfitted with up to six HDTV (1920 x 1080 pixel) cameras, with options varying from 60 degree up to 120 degree horizontal field of view. Images are captured at user-definable intervals, based on 'pulses' received from the ARAN Distance Measuring Instrument (DMI) as well as georeferenced using GPS coordinates. This allows for accurate Right of Way (ROW) image location referencing. Distance based image capture eliminates the capturing of repetitive information when the vehicle is stopped at intersections or in heavy traffic conditions, thereby efficiently utilizing available image storage space.

Image quality may be monitored in real-time during data collection. As images are captured on the Digital Video Storage (DVS) system, adjustments are made automatically for current lighting conditions thus minimizing the negative impact on image quality that transitions from light to dark areas normally impose (such as traveling through tunnels, underpasses, and tree-canopied areas).

Compression ratios are also adjustable during collection through the DVS graphical user interface (GUI).

Cameras are typically mounted in a turret type enclosure above the vehicle cabin, but angled to emulate a windshield view. This affords maximum visibility without restricting driver movements, and also allows for more camera angles than in-cab mounting alternatives. Where the turret is not available or camera type/configurations preclude this option, incab windshield mounting is available.



Vision software



Right of way image



Surveyor software



Right of Way Imaging

The collected imagery may serve as a standalone video inventory of surveyed areas, or may be used in conjunction with additional Fugro software applications. Additional functionality may be found through:

Vision

Fugro's Vision is an all-in-one desktop data processing and analysis suite that can export to any PMS system. With Vision, the user can browse and interact with all collected data in a synchronized environment. The collected data is stored in a central project SQL database and can be matched to the clients' road network using both LRS and GPS references.

iVision

iVision is a web-based application that delivers the ideal solution for inter-office and remote location deployment of images and analyzed road data. Users can access the images and data anywhere they have a web browser and internet connection. Processed data can be viewed in a user-customizable workspace and all views remain synchronized with each other.

Surveyor

Surveyor is designed to provide safe, efficient, and cost effective "network-level" asset inventories. GPS and linear position of roadside assets can be easily, accurately, and safely determined from geo-referenced digital images. Standard and custom assets are easily selected from your text/graphical asset catalogue, minimizing data entry time and ensuring accurate information.

Windshield Rating

Vision allows clients to perform windshield distress rating surveys from the office.

System Components

HDTV Digital Camera(s)

All HDTV cameras produce 1920 x 1080 pixel resolution, with horizontal fields of view varying from 60 to 120 degrees. Specific cameras will be considered for system integration where preferred.

System Control

Cameras and captured images are controlled by the DVS. Through the DVS GUI, adjustments may be made to images prior to or during collection.

Accuracies

Using Fugro's ARAN DMI and GPS, image location is reported to within 10 cm (3.94") of actual geospatial position.

Additional System Integration

Digital images will be linked to data from other available ARAN subsystems, including roughness, rutting, faulting, texture, and pavement automated distress systems (Pave3D).

Output

All images are stored in a user-definable lossless compressed JPEG format. Metadata, including locator information, is stored in the images and can be video on top of the banner image.

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