The Hawkeye 1000 Series is a portable range of road survey equipment, designed to offer affordable solutions for profiling and video data.

HAWKEYE 1000 SERIES

The economic benefits of the 1000 Series and fit for purpose specifications make it an ideal solution for both video and road profiling applications. The system is stored in an easily accessible hardcase that sits in the back seat or back storage area of the vehicle.

Collecting accurate distance, time, and spatial information is assured in Hawkeye through the use of our innovative development, the Heartbeat. The Heartbeat module and support software accurately synchronises each sensor in the system, aligned against multiple inputs from a Distance Measurement Instrument (DMI), DGPS, and inertial systems. This allows for seamless upgrades of your equipment.

By combining multiple modules, the Hawkeye 1000 Series is capable of supporting up to a 3-laser profiler, two digital imaging cameras, Gipsi-Trac Geometry and GPS or DGPS.

PAVEMENT MANAGEMENT INTELLIGENCE

H1000 DIGITAL LASER PROFILER

The H1000 Digital Laser Profiler (DLP) measures longitudinal profile, roughness and macrotexture (MPD and SMTD). A World Bank Class 1 profiler, the H1000 DLP measures road profile using accelerometers and precision laser sensors, to compensate for vehicle body movement.

The Profiler is completely portable, utilising a detachable beam that comes complete with a tow-bar mounting kit, making it perfect for less frequent survey demands.

Applications

- Pavement condition assessment
- Accurate quality assessments
- Quality control and dilapidation surveys
- Contract validation

PAVEMENT MANAGEMENT INTELLIGENCE

Features

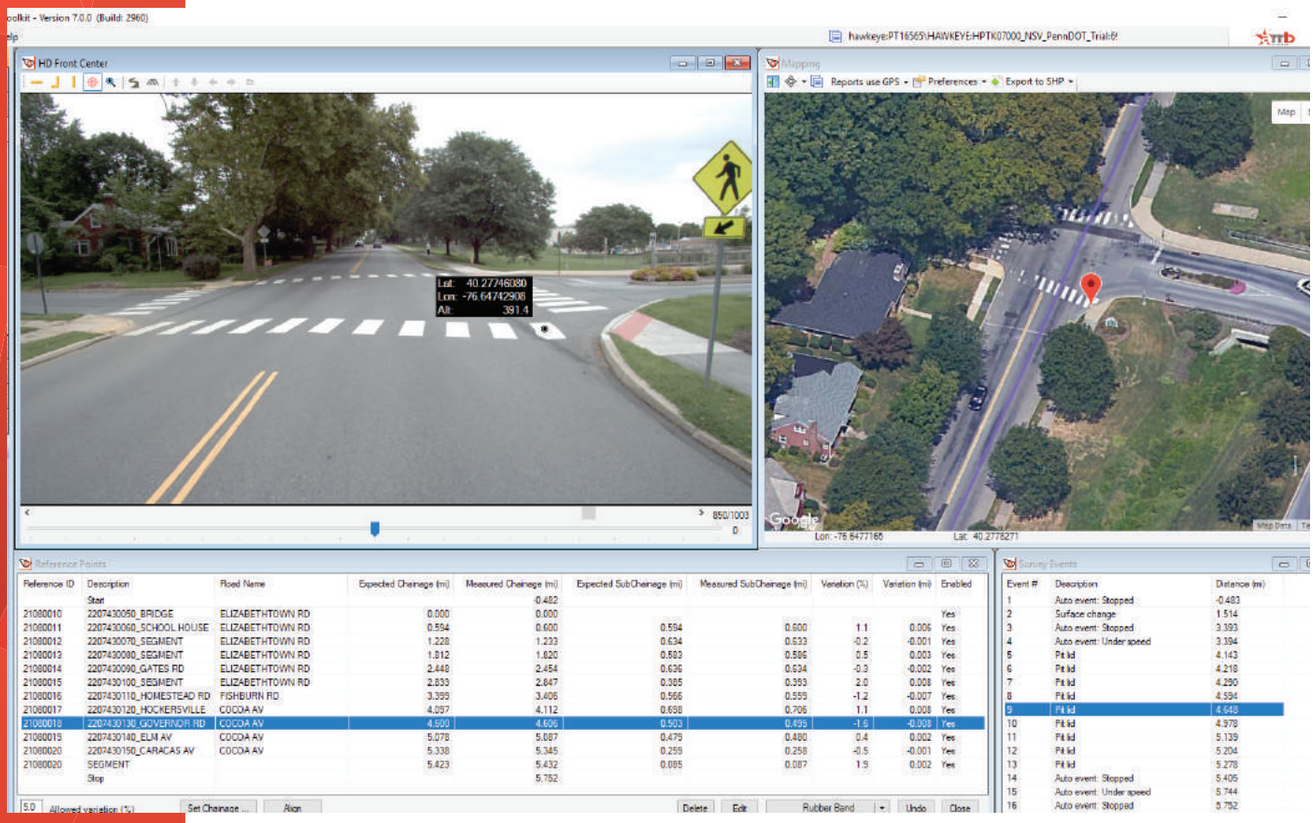
- World Bank Class 1 profiler with a choice of one, two or three laser combinations to suit all budgets
- Simple turnkey operation
- Can be easily shipped for remote survey requirements and short-term vehicle installations
- Easily installed on a vehicle without special tools or technical personnel
- Lightweight aluminium beam with external weatherproof housing
- Data is linked to chainage and GPS coordinates
- Operational at highway speeds to reduce survey time and costs
- Results are independent of vehicle type

Outputs

- Longitudinal profile
- Roughness (IRI, NAASRA, Ride Number, HATI)
- Macrotexture (MPD and SMTD)
- Rut index
- GPS location
- Distance

Compliance with standards

- ASTM E950: Longitudinal profile
- AASHTO PP37: Pavement roughness
- ASTM E1845: Pavement macrotexture
- ISO 13473: Mean Profile Depth (MPD)



H1000 DIGITAL IMAGING SYSTEM

The H1000 Digital Imaging System (DIS) is an imaging unit for visually capturing and locating roads and roadside features. The single, full high definition (HD), colour camera can be mounted on a windscreen or vehicle dashboard.

The DIS is completely portable, using a suction mounted camera and transportable carry case, allowing for the system to be easily transferred between vehicles. Motorised lenses enable the real-time adjustment of the iris for high quality images, with manual zoom and focus controls. If more than one camera is required, a custom roof rack is included to enable the mounting of the cameras onto the survey vehicle.

Applications

- Visual identification of roadside assets
- Right of way assessment
- Road safety assessment

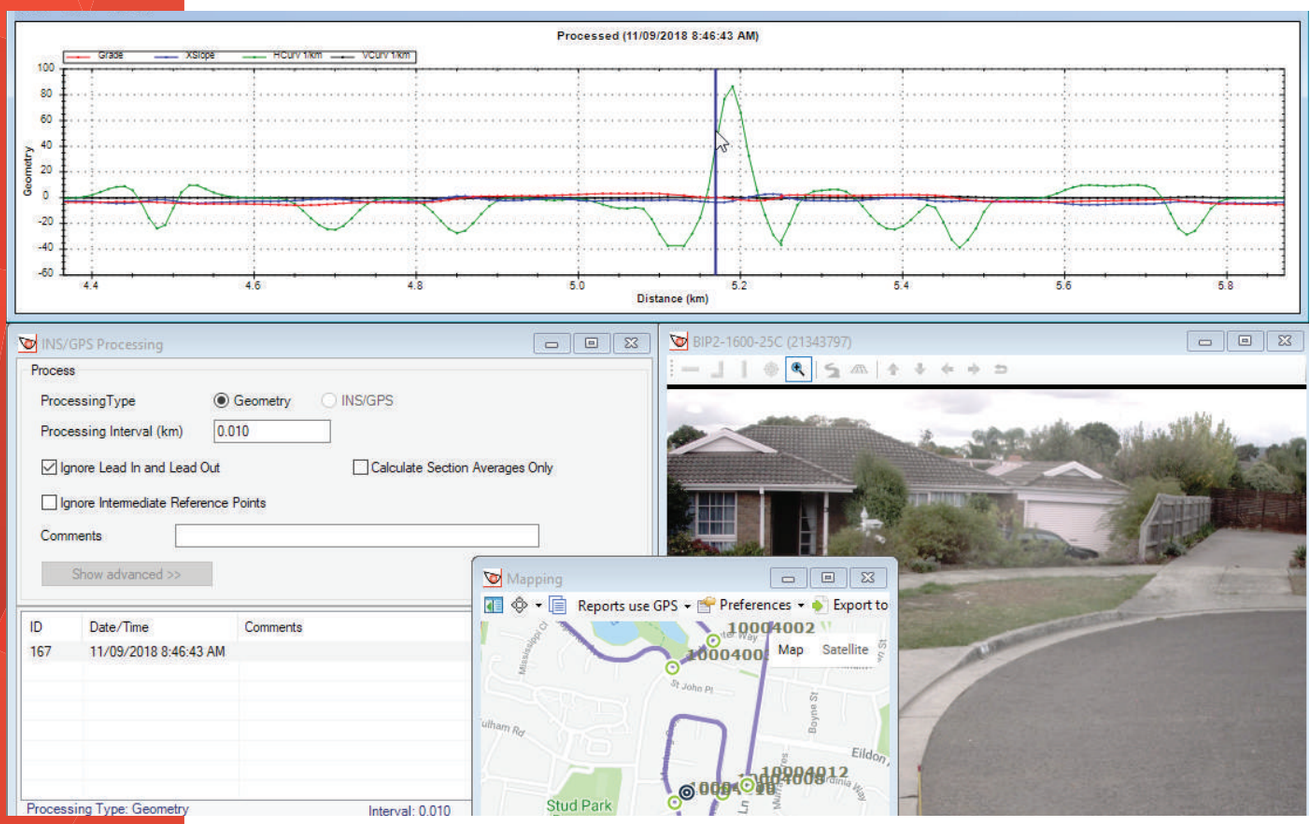
PAVEMENT MANAGEMENT INTELLIGENCE

Features

- Up to two HD cameras can be supported
- Simple turnkey operation
- Can be shipped for remote survey requirements and short-term vehicle installations
- Uses .AVI storage files
- Data is linked to chainage and GPS coordinates
- Operational at highways speeds to reduce survey time and costs
- Ideal for use on a variety of vehicles
- Georeferencing and measurement capabilities

Outputs

- Digital imagery
- GPS location
- Distance
- Shapefiles



H1000 GIPSI-TRAC GEOMETRY

The GIPSI-Trac 2 is the next generation GNSS + INS (Global Navigation Satellite Systems + Inertial Navigation System) geometry module, using dead-reckoning sensors and dual GNSS antennas.

This combined system provides a far greater update rate and supports more satellite systems than previous GNSS offerings, including SBAS and Omnistar. It boasts real-time fused GNSS/INS outputs in all survey conditions, including periods of GNSS outage.

The system records and combines inertial data from a 3-axis gyroscope, 3-axis accelerometer and a distance sensor with dual GNSS positional information. The built-in dead-reckoning allows for position data to be recorded when in tunnels, under bridges and locations with little or no GNSS coverage.

Applications

- Road geometry and measurement
- Mapping
- Conformance to pavement specifications

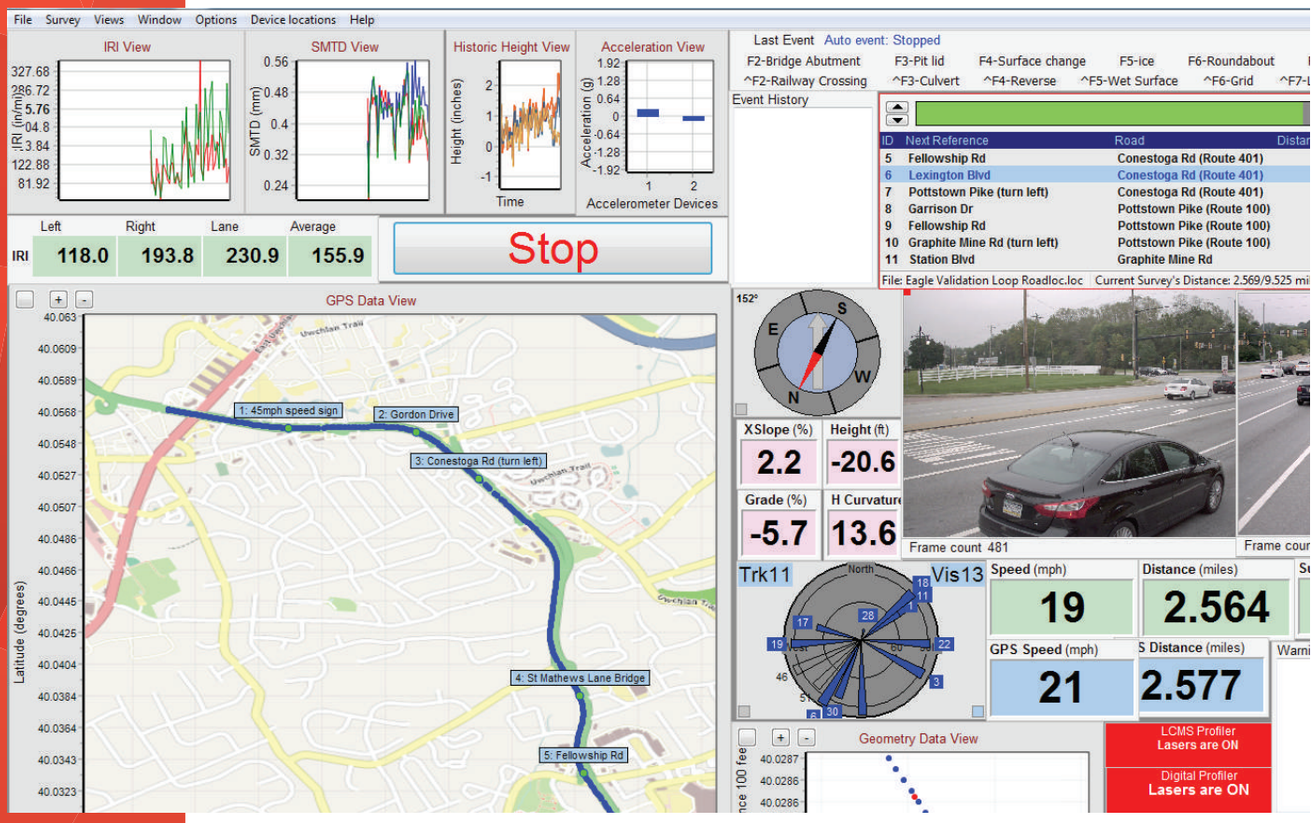
PAVEMENT MANAGEMENT INTELLIGENCE

Features

- Uses an integrated GNSS receiver and dead-reckoning inertial sensors
- 200Hz fused data output
- Typical mapping accuracy of 1.2 m
- Exports to CSV and point or polyline shapefiles
- Operational at highway speeds to reduce survey time and costs
- Fully customisable GPS projection methods (Lat, Long, Easting, Northing and a range of datums)
- Supports Universal / Transverse Mercator,
- Operates in all locations:
  - Inside tunnels
  - Under bridges
  - highly vegetated or mountainous regions

Outputs

- Grade
- Cross-slope
- Horizontal and vertical curvature
- Inertially corrected GNSS position
- Distance



HAWKEYE ONLOOKER LIVE

Hawkeye Onlooker Live software is an interactive, real-time acquisition control interface that is capable of simultaneously controlling all inputs from any Hawkeye system, from a single software application.

The software runs on a dedicated computer in the vehicle or on a laptop-based system, with a fully customisable layout. The network control interface enables real-time result reporting and the capability to progressively add new Hawkeye modules, without the need for additional software.

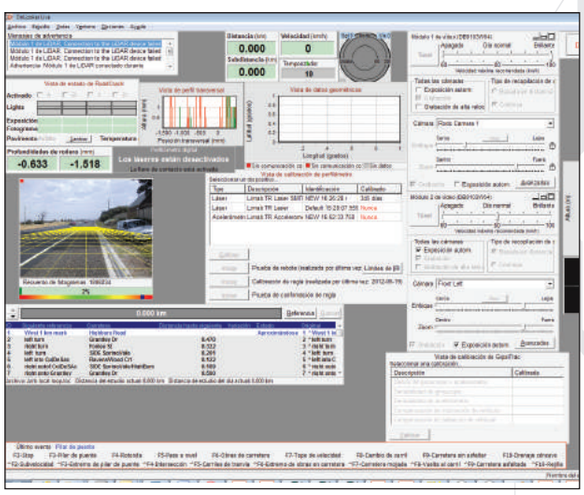
PAVEMENT MANAGEMENT INTELLIGENCE

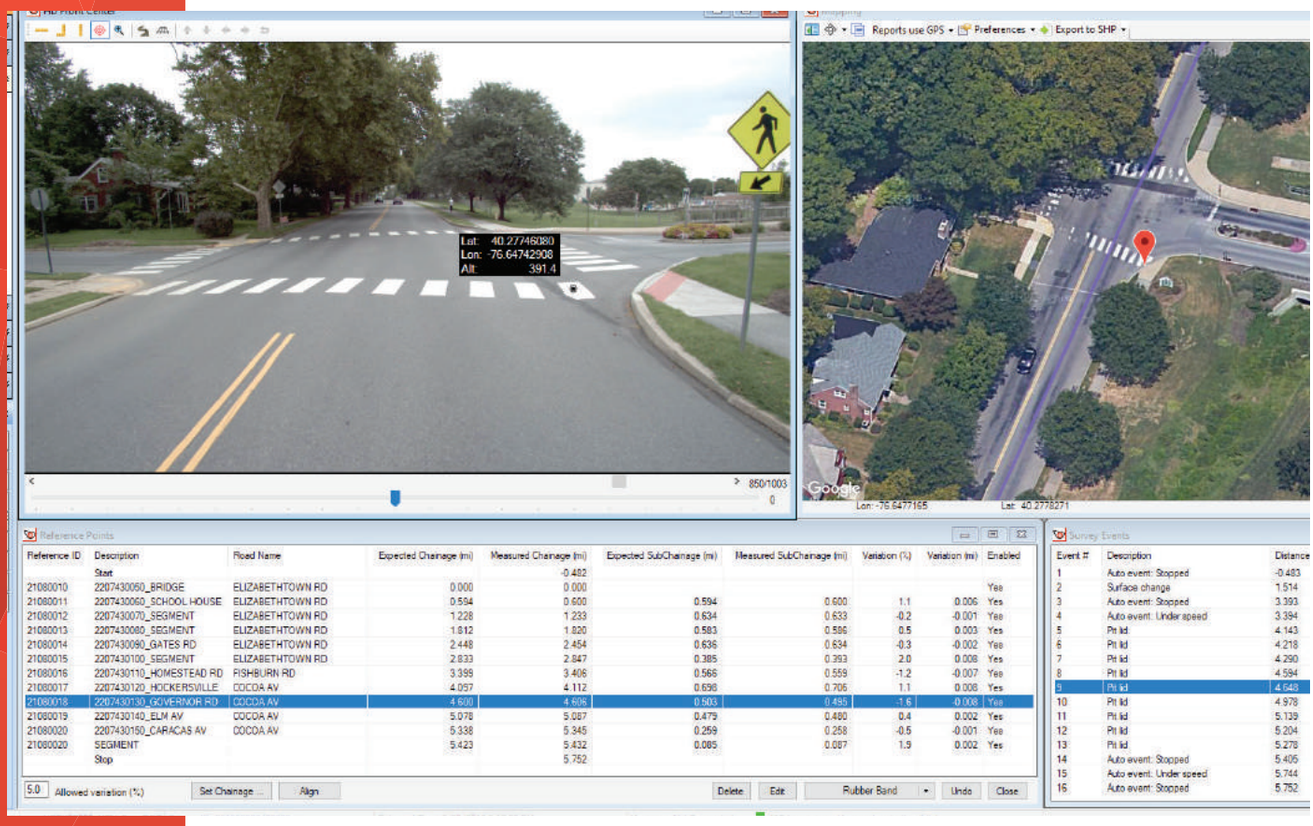
Features

- Windows graphical user interface for management of multiple computer systems
- Customisable screen layouts to suit individual operator requirements
- Multiple language support: English, Chinese, Spanish, Arabic and Russian
- Survey navigational tools such as compass, location reference points, maps and recording of events
- Computer generated speech for system warnings and other items requiring attention
- Supports a range of road reference formats

Capability

- Digital display of:
  - profilometry,
  - video imagery,
  - speed and distance
  - geometry
- Graphical display of:
  - GPS maps
  - road profile information
  - user defined survey notes tool





HAWKEYE PROCESSING TOOLKIT

The easy-to-use interface of Hawkeye Processing Toolkit features an integrated image viewer and centralised database to review all collected survey parameters. The software can be used to review and rate individual video frames against chainage and GPS, save images to file and zoom-in to inspect areas of interest. Multiple images can be assessed simultaneously and the road can be 'driven' at a rate selected by the operator.

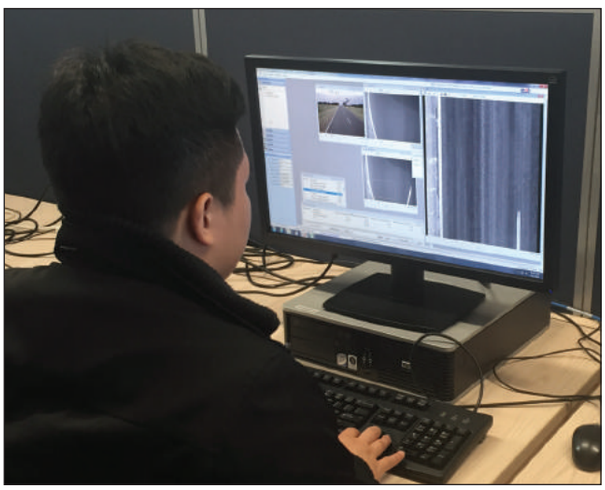
PAVEMENT MANAGEMENT INTELLIGENCE

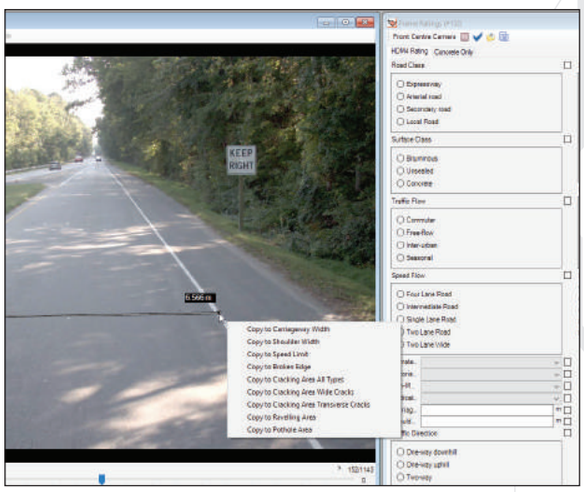
Features

- Extensive analysis and reporting capability
- Advanced mapping interface that supports Google background maps
- Centralised databases to allow multiple users to process and view the same survey data simultaneously
- Multiple language support: English, Chinese, Spanish, Arabic and Russian
- Metric and Imperial measurement systems supported
- Windows launching allowing for cross reference of data between applications
- Batch rubber banding and editable reference points
- Survey search filter
- Export to most PMS and GIS applications
- Batch processing and exporting
- Data export to CSV, PDF, MS Word, MS Excel, RTF, KML and SHP formats
- Windows (32 and 64 bit) compatible

Capability

- Calculation of:
  - International Roughness Index (IRI)
  - MPD and SMTD macrotexture
  - Rut index
  - Faulting
  - Longitudinal profile
  - Geometry
- Image area / length / height measurement
- Image stitching, zoom and resizing
- Asset location
- Profilometry analysis
- Graphical inertial / GPS mapping
- Shapefile imports
- User configurable rating forms
- Advanced HDM-4 exporting





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The Hawkeye 2000 Series is a professional range of equipment designed to meet the most demanding of survey applications.

HAWKEYE 2000 SERIES

The Hawkeye 2000 Series is a highly specialised range of survey products that can be installed in a wide variety of vehicles due to its limited space and power requirements. The modular design of the system enables easy configuration of multiple sensors to meet or exceed the toughest specifications.

Collecting accurate distance, time, and spatial information is assured in Hawkeye through the use of our innovative development, the Heartbeat. The Heartbeat module and support software accurately synchronises each sensor in the system, aligned against multiple inputs from a Distance Measurement Instrument (DMI), DGPS, and inertial systems.

This allows for seamless upgrades of your equipment. Simply choose your required modules, and they can be added at the time of initial installation, or at a later date convenient to you.

Our advanced research and development program ensures we provide our clients the best products, utilising the latest research and technologies, backed by ARRB Systems experienced support team.

PAVEMENT MANAGEMENT INTELLIGENCE

HAWKEYE NETWORK SURVEY VEHICLE

Hawkeye 2000 packages are installed on a dedicated Network Survey Vehicle, allowing for safe and efficient data collection of multiple network parameters. Once your requirements are established, simply customise the Hawkeye 2000 packages to meet your needs. Should your requirements grow in the future, you can simply upgrade your existing Hawkeye by adding new modules. With new technologies being integrated frequently, ARRB Systems will always have the solution you need to meet your road network data requirements.

Applications

- Network and project level road and asset collection surveys
- Routine pavement monitoring surveys
- Roadside inventory and asset management
- Road geometry and mapping surveys
- Contractor quality control
- Road safety assessment
- Line marking reflectivity
- Airport runway inspections

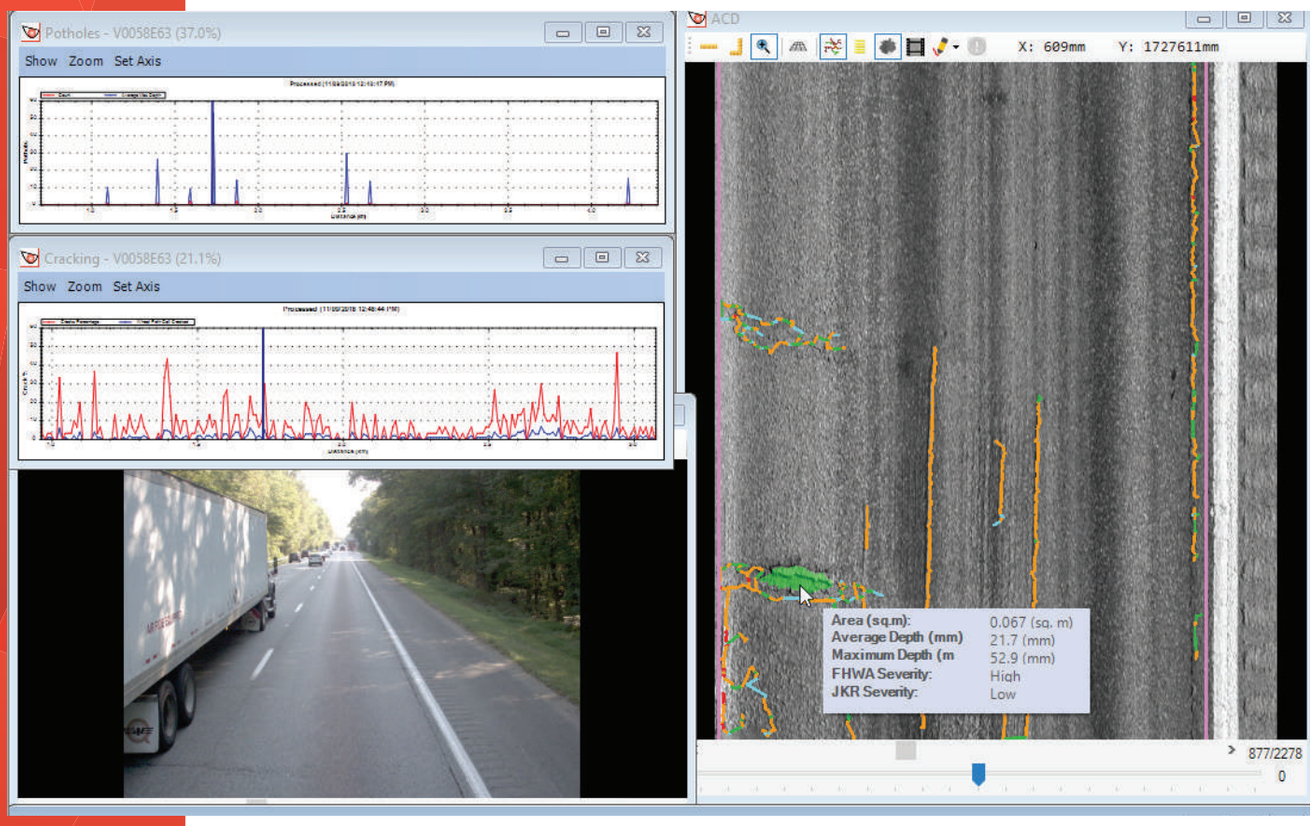
PAVEMENT MANAGEMENT INTELLIGENCE

Features

- The Heartbeat module provides a fully integrated system with common data and survey control referencing
- Enables safe and efficient data collection for both urban and rural surveys
- Survey time is reduced by collecting all condition data and imagery in a single pass
- Uses standard interfaces and protocols to take advantage of future devices and protect your investment
- Installation available on a vast range of vehicles
- Available with one or two operator consoles

Compliance with standards

- ASTM E950: Longitudinal profile
- AASHTO PP37: Pavement roughness
- ASTM E1845: Pavement macrotexture
- ISO 13473: Mean Profile Depth (MPD)



H2000 AUTOMATIC CRACK DETECTION

The H2000 Automatic Crack Detection (ACD) system enables automatic detection of cracks and other road surface features. The ACD system is comprised of two high performance 3D laser units that are fitted at the rear of the survey vehicle, vertically above the pavement.

The unit projects a laser line onto the pavement and the image is captured by the camera, allowing it to measure the transverse profile of the pavement to a 0.5 mm height resolution. The ACD is fully integrated into the Hawkeye platform, meaning outputs are precisely aligned, both linearly and spatially, with the measurements from other sensors.

We also have the ability to analyse the 'crack maps' using our own proprietary software. The flexibility of the Hawkeye software allows reporting of the type, severity and extent of cracking, in a manner that meets the specific needs of the user.

Appplications

- Network-level pavement condition assessment
- Accurate quality assessments for contractors
- Routine pavement monitoring surveys
- Contract validation

PAVEMENT MANAGEMENT INTELLIGENCE

Features

- Rut depth measured over 4 m width at 1 mm transverse resolution
- Rutting measured in accordance with methodology found in ASTM E1703
- Day and night operation, unaffected by shadows
- Low power consumption
- Data compression algorithms to minimise storage
- Lightweight and waterproof
- Measurements are possible on all sealed surfaces
- Data is linked to chainage and GPS coordinates
- Operational at highway speeds to reduce survey time and costs

Outputs

- Hawkeye custom cracking reports
- Rutting
- Lane marking
- Raveling
- Pavement defects (potholes, kerb and edge

H2000 DIGITAL LASER PROFILER

The H2000 Digital Laser Profiler (DLP) can be configured with a variety of sensors to enable the collection of road condition data, including: International Roughness Index (IRI), Ride Number (RN), Rut Depth, Mean Profile Depth (MPD), Sensor Measured Texture Depth (SMTD) and other parameters

The profiler is configurable from a single laser measurement system, to a 17 laser system, ensuring your specific requirements can be met. Used in conjunction with the Hawkeye Processing Toolkit, you have the ability to produce tables, graphs, reports and exports from your collected data.

Applications

- Network level surveys with international standard results
- Accurate quality assessments for contractors
- Baseline surveys and Dilapidation
- Contract validation

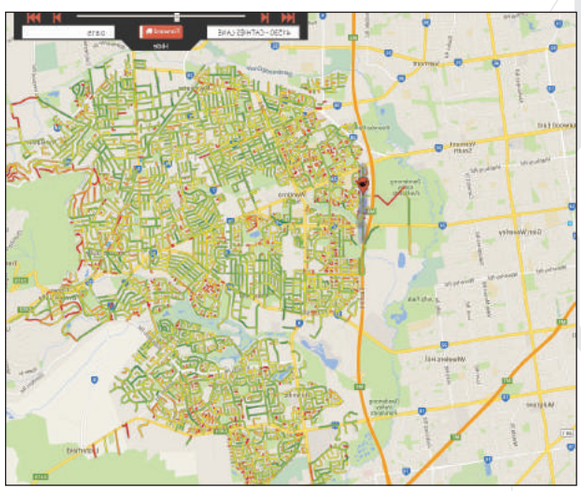
PAVEMENT MANAGEMENT INTELLIGENCE

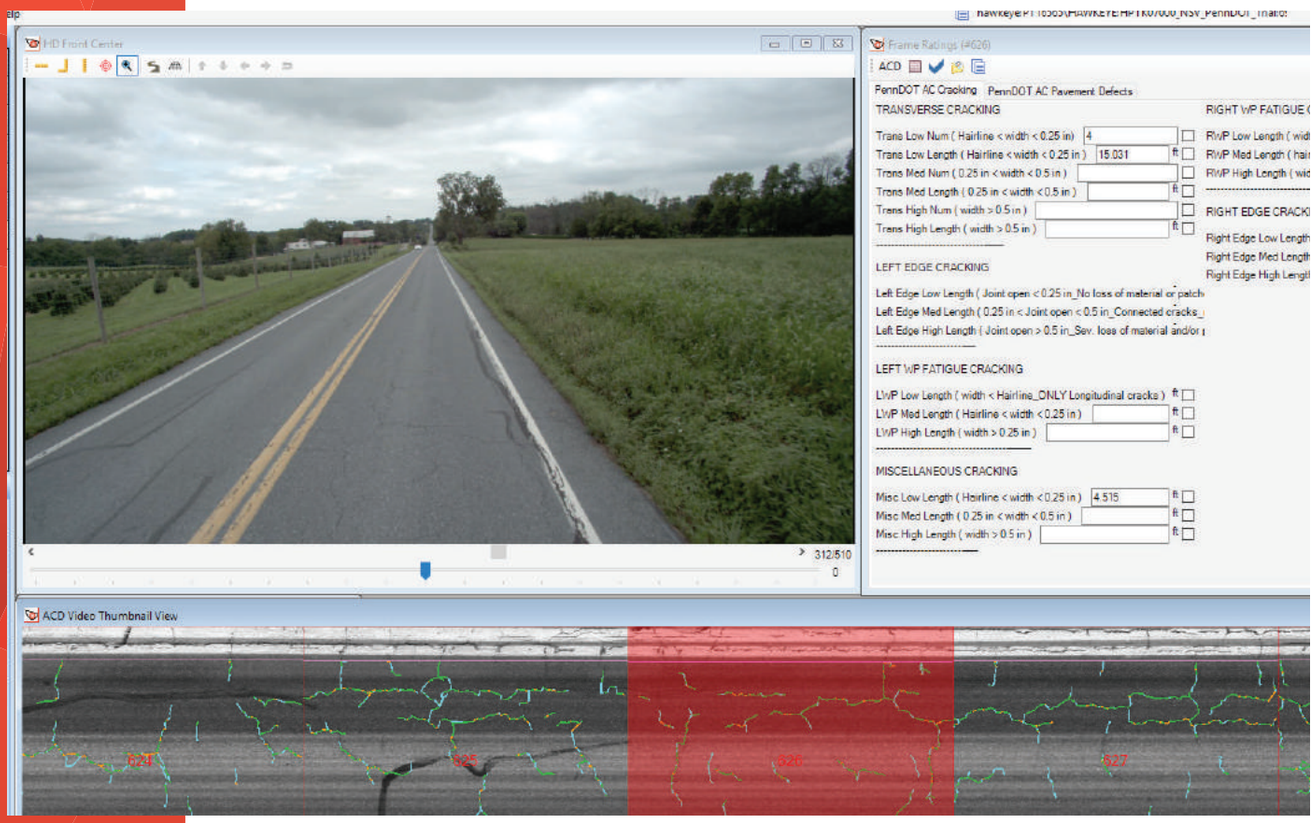
Features

- Upgradeable to allow for the addition of more lasers
- Rugged, aluminium beam design
- Operational at highway speeds to reduce survey time and costs
- Results are independent of vehicle type
- Measurements possible on all sealed surfaces
- Data is linked to chainage and GPS coordinates

Compliance with Standards

- ASTM E950: Longitudinal profile
- AASHTO PP37: Pavement roughness
- ASTM E1845: Pavement macrotexture
- ISO 13473: Mean Profile Depth (MPD)





H2000 DIGITAL IMAGING SYSTEM

The H2000 Asset View Digital Imaging System (DIS) is capable of visually identifying and locating roadside features. The system boasts full high definition (HD), colour video frames to ensure a continuous digital record of the roadway. The calibrated video cameras accurately log digital images of roadside assets against other parameters such as distance and GPS.

Motorised lenses enable the real-time adjustment of the iris for high quality images, with manual zoom and focus controls. Wide field of view lenses are also available with fixed iris, automatic exposure controls. Up to eight cameras can be supported, each in a waterproof enclosure and all controlled through the common Hawkeye interface.

Applications

- Visual identification of roadside features and assets
- Right-of-way roadside condition assessment
- Asset location for GIS applications
- Road safety assessment

PAVEMENT MANAGEMENT INTELLIGENCE

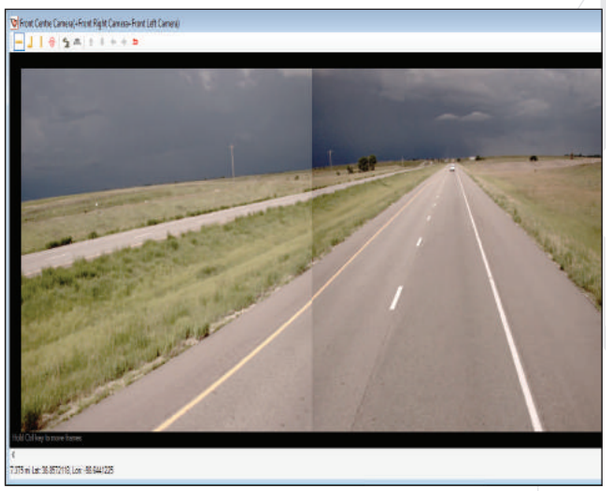
HAWKEYE

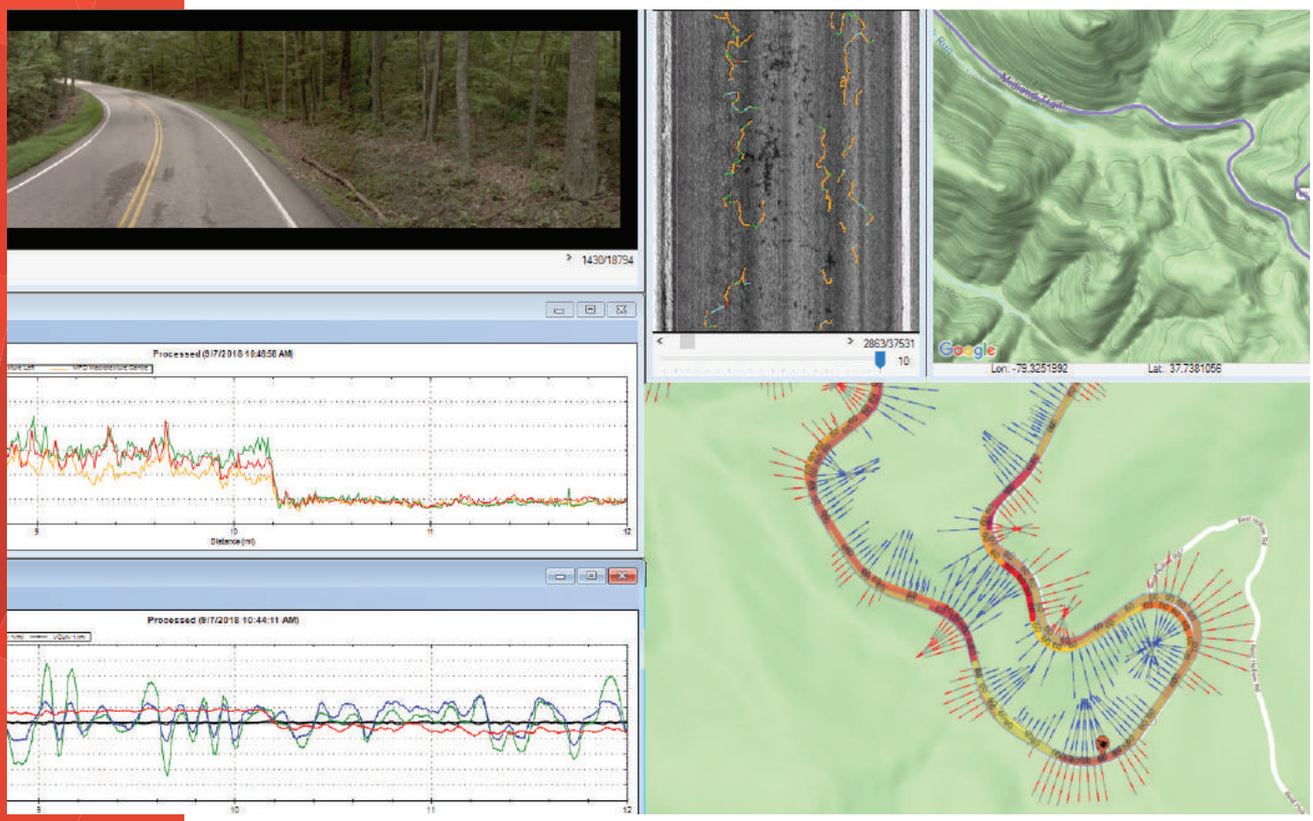
Features

- Provides continuous high-resolution, full-colour digital images
- Supports up to eight cameras
- Uses .AVI storage files
- Data is linked to chainage and GPS coordinates
- Operational at highway speeds to reduce survey time and costs
- Images can be used to measure, geo-reference and note points of interest

Outputs

- Digital imagery (up to 3 cameras stitched)
- GPS location / distance





H2000 GIPSI-TRAC GEOMETRY

The GIPSI-Trac 2 is the next generation GNSS + INS (Global Navigation Satellite Systems + Inertial Navigation System) geometry module, using dead-reckoning sensors and dual GNSS antennas.

This combined system provides a far greater update rate and supports more satellite systems than previous GNSS offerings, including SBAS and Omnistar. It boasts real-time fused GNSS/INS outputs in all survey conditions, including periods of GNSS outage.

The system records and combines inertial data from a 3-axis gyroscope, 3-axis accelerometer and a distance sensor with dual GNSS positional information. The built-in dead-reckoning allows for position data to be recorded when in tunnels, under bridges and locations with little or no GNSS coverage.

Applications

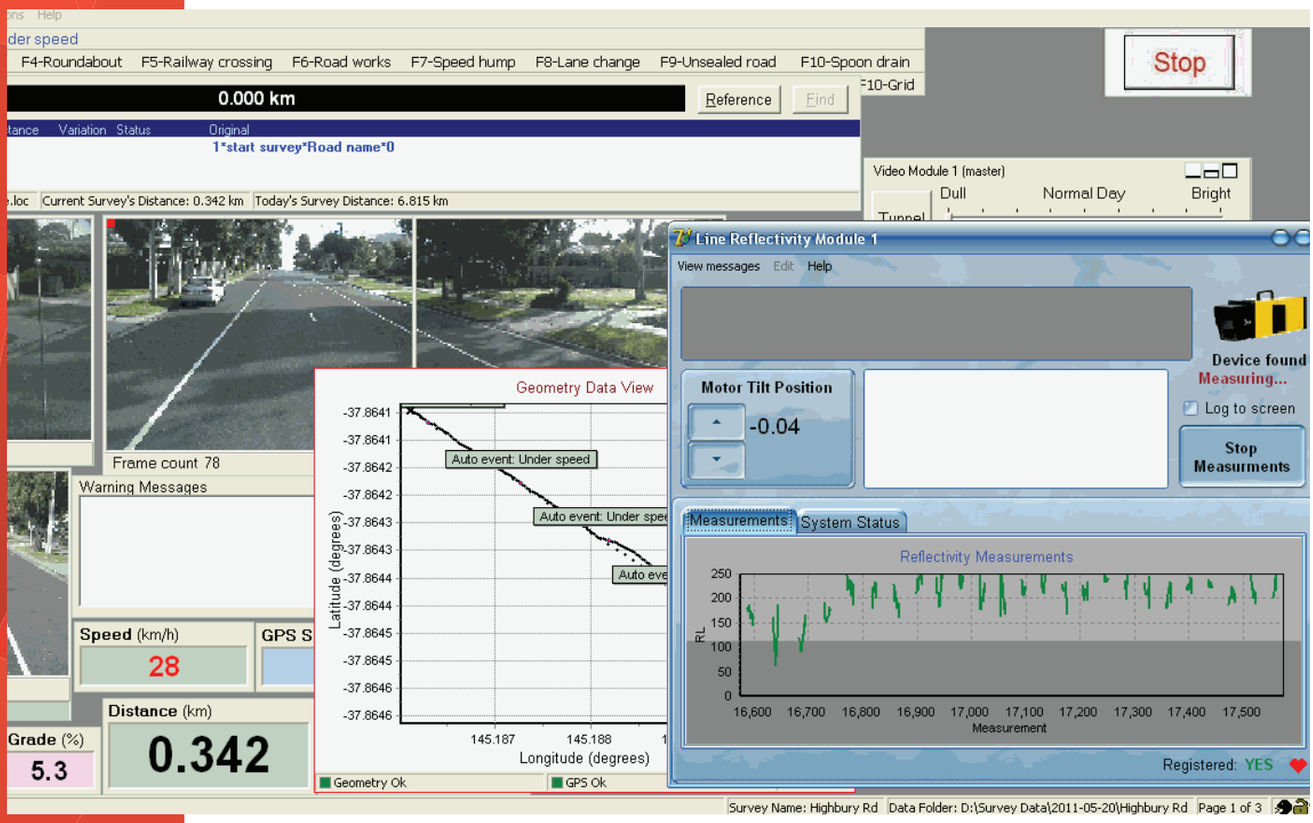
- Road geometry and measurement
- Mapping
- Conformance to pavement specifications

Features

- Uses an integrated GNSS receiver and dead-reckoning inertial sensors
- 200Hz fused data output
- Typical mapping accuracy of 1.2 m
- Exports to CSV and point or polyline shapefiles
- Operational at highway speeds to reduce survey time and costs
- Fully customisable GPS projection methods (Lat, Long, Easting, Northing and a range of datums)
- Supports Universal / Transverse Mercator,
- Operates in all locations:
  - Inside tunnels
  - Under bridges
  - highly vegetated or mountainous regions

Outputs

- Grade
- Cross-slope
- Horizontal and vertical curvature
- Inertially corrected GNSS position
- Distance



H2000 MOBILE LINE REFLECTIVITY

The Hawkeye 2000 Mobile Line Retroreflectivity package is a traffic speed device for measuring road line marking reflectivity. The LTL-M has been integrated into the Hawkeye platform to allow simultaneous collection of line reflectivity as part of general network surveys. This includes the measurement of night time visibility of both white and yellow road markings under dry and wet road conditions, It simultaneously measures the daylight contrast.

The LTL-M is a robust, reliable and advanced instrument developed specifically for network survey. It uses the latest camera and illumination technology resulting in high accuracy data collection which is independent of road geometry and vehicle tracking.

Applications

- Line marking reflectivity
- Road-stud reflectivity
- Line marking mapping
- Quality assurance

PAVEMENT MANAGEMENT INTELLIGENCE

Features

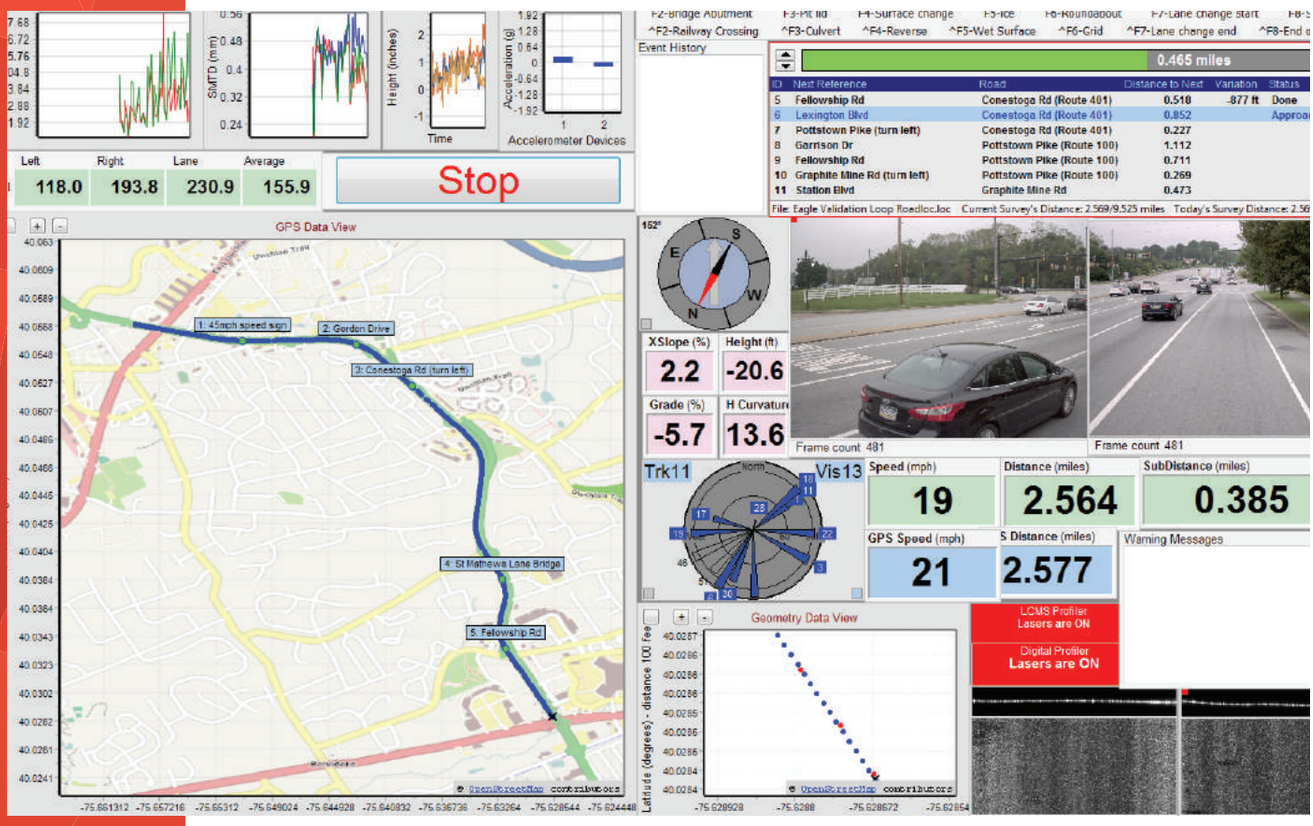
- Continuous measurement at highway speeds
- Measures and reports double lines
- Sunlight compensation for daylight contrast measurement
- User definable reporting interval
- Data is linked to chainage and GPS coordinates

Outputs

- Retroreflectivity (Rl)
- Marking type (solid, segmented)
- Number of road studs
- Lane width
- Daylight contrast

Compliance with Standards

- ASTM E1710: Retroreflective pavement measurement
- EN 1436: Road marking performance



HAWKEYE ONLOOKER LIVE

Hawkeye Onlooker Live software is an interactive, real-time acquisition control interface that is capable of simultaneously controlling all inputs from any Hawkeye system, from a single software application.

The software runs on a dedicated computer in the vehicle or on a laptop-based system, with a fully customisable layout. The network control interface enables real-time result reporting and the capability to progressively add new Hawkeye modules, without the need for additional software.

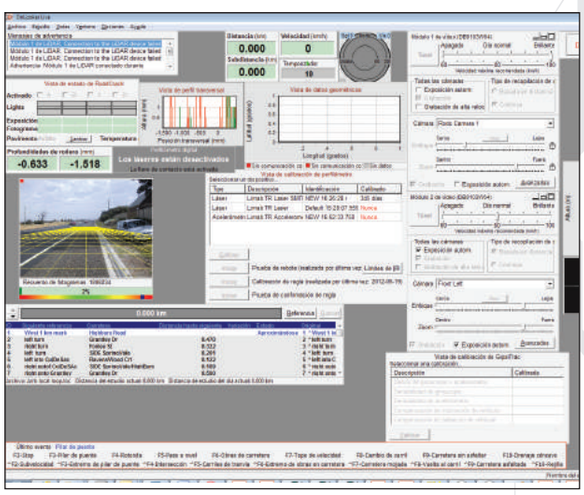
PAVEMENT MANAGEMENT INTELLIGENCE

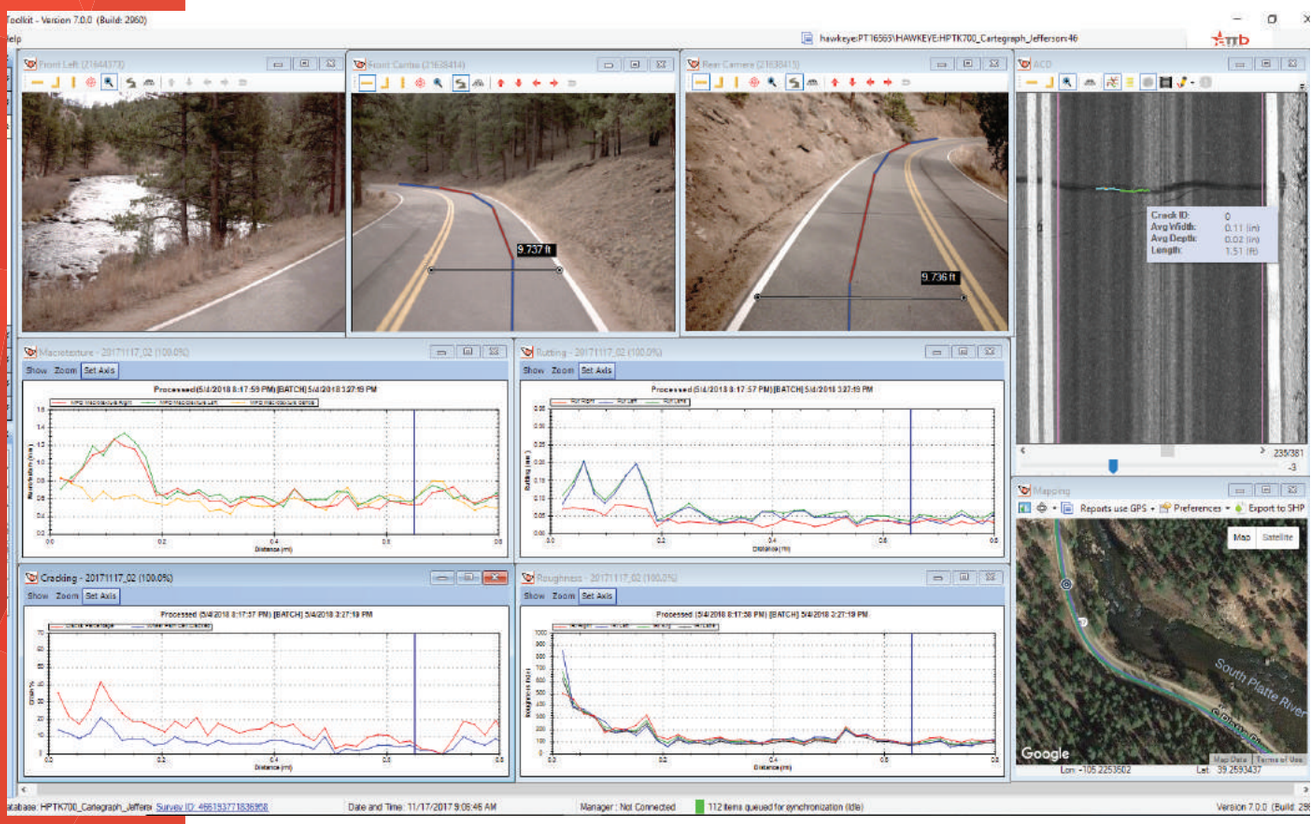
Features

- Real-time Windows graphical user interface for management of multiple computer systems
- Customisable screen layouts to suit individual operator requirements
- Multiple language support: English, Chinese, Spanish, Arabic and Russian
- Survey navigational tools such as compass, location reference points, maps and recording of events
- Computer generated speech for system warnings and other items requiring attention
- Supports a range of road reference formats

Capability

- Digital display of:
  - profilometry,
  - video imagery,
  - speed and distance
  - geometry
- Graphical display of:
  - GPS maps
  - inertial geometry mapping
  - road profile information
  - user defined survey notes tool





HAWKEYE PROCESSING TOOLKIT

The easy-to-use interface of Hawkeye Processing Toolkit features an integrated image viewer and centralised database to review all collected survey parameters. The software can be used to review and rate individual video frames against chainage and GPS, save images to file and zoom-in to inspect areas of interest. Multiple images can be assessed simultaneously and the road can be 'driven' at a rate selected by the operator.

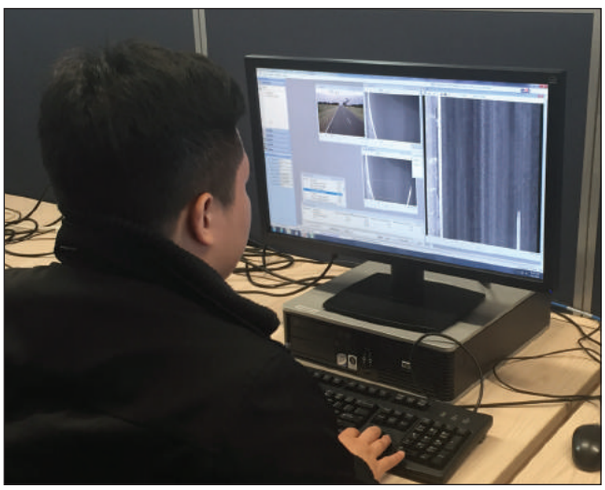
PAVEMENT MANAGEMENT INTELLIGENCE

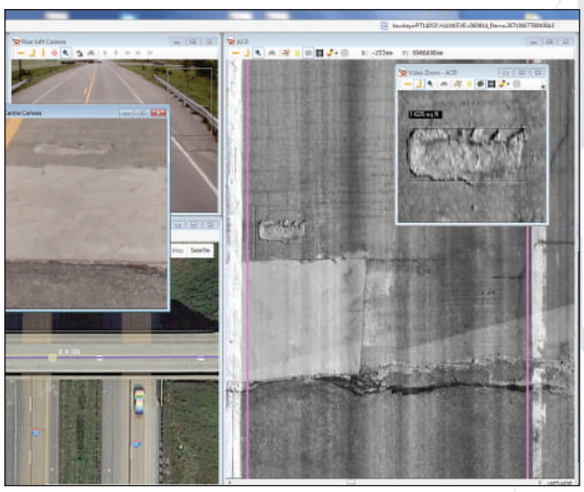
Features

- Extensive analysis and reporting capability
- Advanced mapping interface that supports Google background maps
- Centralised databases to allow multiple users to process and view the same survey data simultaneously
- Multiple language support: English, Chinese, Spanish, Arabic and Russian
- Metric and Imperial measurement systems supported
- Windows launching allowing for cross reference of data between applications
- Batch rubber banding and editable reference points
- Survey search filter
- Export to most PMS and GIS applications
- Batch processing and exporting
- Data export to CSV, PDF, MS Word, MS Excel, RTF, KML and SHP formats
- Windows (32 and 64 bit) compatible

Capability

- Calculation of:
  - International Roughness Index (IRI)
  - MPD and SMTD macrotexture
  - Rut index
  - Faulting
  - Longitudinal profile
  - Geometry
- Image area / length / height measurement
- Image stitching, zoom and resizing
- Asset location
- Profilometry analysis
- Graphical inertial / GPS mapping
- Shapefile imports
- User configurable rating forms
- Advanced HDM-4 exporting





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HAWKEYE

arrb SYSTEMS

The first fully integrated road surface and sub-surface condition assessment system, providing functional and structural data at highway speeds.

iPAVe

The intelligent Pavement Assessment Vehicle (iPAVe) utilises innovative traffic speed deflectometer technology, integrated with the Hawkeye operating system, enabling comprehensive road surface and sub-surface condition assessment.

Doppler lasers monitor the response of a pavement to the application of a rolling load, providing data that includes continuous pavement deflection profiles, from which bearing capacity indices can be derived and pavement fatigue estimated.

The high accuracy and resolution of the iPAVe enables engineers to pin-point areas where the pavement has structural deficiencies and could be subject to failure. Roughness, rutting, texture, geometry, and automated cracking are measured along with several high definition cameras to collect asset and 3D pavement imagery, with the Hawkeye Platform fully synchronising all data streams.

Applications

- Collects all pavement surface and structural parameters in one pass
- Ability to operate at traffic speeds, improving production, safety and efficiency
- Cost efficient with rapid collection and no traffic control is required
- Continuous measurements at higher resolution than traditional means (i.e FWD)

PAVEMENT MANAGEMENT INTELLIGENCE

FUNCTIONAL AND STRUCTURAL PAVEMENT ASSESSMENT AT PROJECT AND NETWORK LEVEL

Features

- Powerful tool in managing the condition, maintenance and life-cycle of road networks
- High resolution detail and accuracy enables both project and network level analysis
- Fully synchronised structural and surface condition and imagery measurements enable comprehensive forensic analysis of pavement failures
- Assists in identifying the cause of the pavement failure, and what treatment is (or is not) required
- Ability to determine the structural properties of the pavement including sub-grade modulus, pavement modulus, and effective structural number
- Capable of collecting structural capacity of entire networks in just weeks, that would take decades via traditional means
- Interchangeable, scalable and identical Hawkeye outputs enables flexibility and optimization in network survey coverage
- Safety is significantly increased for operator and the road user

PAVEMENT MANAGEMENT INTELLIGENCE

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Introducing a major advancement in measuring skid resistance and interrelated road surface characteristics, manufactured in compliance with BS 7941-1:2006.

iSAVe

The intelligent Safety Assessment Vehicle (iSAVe) provides a major advancement in measuring skid resistance and inter-related road surface characteristics. Developed in conjunction with our Swedish partner, ASFT and working under license to the UK Transport Research Laboratory (TRL), ARRB Systems' new Hawkeye iSAVe is manufactured in full compliance with the current British Standard; BS 7941-1:2006.

This system is used to measure the wet skid resistance of defined sections of road surface across a network, in both wheel paths. This helps ensure that an appropriate level of 'grip' is provided throughout. An emphasis is placed on high demand locations, such as the approaches to traffic signals and pedestrian crossings, or around tight curves, where vehicles are typically required to brake and accelerate, sometimes in emergency situations.

A controlled flow of water wets the road surface immediately in front of the test wheel, and the system is capable of collecting continuously for up to 300kms of data at a time (single wheelpath testing), due to the low water flow requirements and large reservoir. The measuring wheel is set at a 20° angle to the forward movement of the vehicle with a known applied load. The sideways force generated by this process is directly related to the wet skid resistance of the road surface.

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MEASURING SKID RESISTANCE AND INTER-RELATED ROAD SURFACE CHARACTERISTICS

Features

- Measurements according to BS7941-1: 2016
- Fully licensed and compliant system
- Data collection in both wheel paths
- Survey range of up to 300kms per water load (single wheelpath)
- Spilt rim design enables rapid change of measuring tyre

Along with the collection of wet skidding resistance, the iSAVe is fitted with sensors capable of collecting:

- Roughness (IRI)
- Rutting
- Macrotexture (SMTD or MPD)
- Asset imagery
- GPS and distance
- Geometry (crossfall, grade, horizontal and vertical curvature)

It is also fitted with the following additional features to minimise measurement variability:

- Dynamic monitoring of the vertical load
- Continuous tyre pressure monitoring
- Dynamic speed controlled water system
- Ambient air temperature monitoring
- Tyre temperature monitoring

Being integrated into the Hawkeye platform allows for the inclusion of additional data collection sensors, which can all be batch processed within Hawkeye Processing Toolkit and uploaded to Hawkeye Insight for efficient data display and investigation.

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A cost-effective, portable device that provides objective and repeatable roughness results on sealed and unsealed roads.

ROUGHOMETER III

The Roughometer III is a response-type roughness device, complying to World Bank Class 3 requirements. Unlike other devices in this class, the Roughometer III eliminates the uncertainties associated with the vehicle (such as the vehicle's suspension or passenger weight) by directly measuring the axle movement with a precision accelerometer. This means the Roughometer III does not need to be calibrated experimentally to produce true International Roughness Index (IRI) results.

Practical and easy-to-use, the Roughometer III provides a simple technique for road quality assessment and has the advantage of an integrated GPS unit and the ability to collect up to 13,000 km of data. Once a survey has been undertaken, the Roughometer III processing software enables the data to be formatted into custom graphs, tables and maps.

Applications

- Provide objective data for true evaluation of the roughness level of the road
- Objectively compare and analyse which roads are in need of repair
- Monitoring roughness deterioration trends on both sealed and unsealed roads, or roads that can't be surveyed by a laser profiler

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COLLECT ACCURATE ROUGHNESS DATA WITH INTEGRATED GPS

Features

- Accurate and repeatable outputs regardless of vehicle type, suspension and passenger loads
- Suitable on sealed and unsealed roads
- Axle-mounted inertial sensor used to determine road profile and roughness
- Integrated GPS for location data with on-screen display of satellite tracking status
- Outputs in International Roughness Index (IRI)
- Can be installed in most passenger and light commercial vehicles
- Fast and simple download of data, to laptop or computer, using USB connection
- Multi-format reports available including tables, graphs, GPS maps and .CSV files

Components

- Roughometer hand-held controller
- Interface module
- Inertial module and mounting brackets
- Distance Measurement Instrument (DMI)
- GPS antenna with magnetic base mount
- Processing software

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The Walking Profiler G3 is a high-precision measurement instrument for collecting surface condition information, at true walking speed.

WALKING PROFILER G3

The Walking Profiler (WP) G3 produces outputs from pavement profile, providing International Roughness Index (IRI), MPD texture (as an optional parameter) and distance. Differing from previous generations, the WP unit utilises a tri-axial accelerometer mounted on a rolling platform, to enable measurement of longitudinal profile. This platform is separate to the carriage, which means it is less susceptible to operator induced error.

Data can be collected at variable speeds up to 5km/hr and is controlled by an Android tablet. Real-time results are displayed on the screen, allowing for on-site decision making.

Applications

- Provides outputs of IRI, longitudinal profile and distance
- Reference tool for calibrating and assessing high speed profilers
- Suitable for many surfaces, including paved roads and footpaths, airfields and runways, bridges and carparks.

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PRECISION PROFILING TOOL FOR CLASS 1 APPLICATIONS

Features

- World Bank Class 1 Profilometry device
- Varying collection speed options
- Optional laser for MPD texture measurement
- Android tablet operation
- Bluetooth connectivity
- Outputs of ERD and PPF files, for use in ProVAL

Components

- Walking Profiler G3 unit
- Android tablet
- Battery charger
- Calibration plate and block
- Transportation case

ARRB SYSTEMS

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HAWKEYE

HAWKEYE INSIGHT

Hawkeye Insight allows the user to navigate through their collected data parameters and assess the condition of their roads, utilising the familiar mapping functionality of Google Maps. Users can specify the exact location they would like to see, either via road name or number, or via simply clicking on the location, to have data outputs of that location presented instantly in spatial or graphical form.

Users can virtually drive through their network at high speed, while individual images can also be displayed with measurement tools and flexible charting options. Automated cracking data can be charted, spatially represented, or displayed as a visual satellite view with every crack visible from a bird's eye view.

Data is securely hosted externally to overcome common IT issues and with no need to install software, your network data is easily accessible from anywhere, anytime on multiple platforms.

Applications

- Display multiple customer-defined data layers
- Year on year comparisons
- Up to nine thumbnail images, expandable to high resolution
- On-screen height and width measurement
- View and export, tables, shapefiles, charts and images
- High speed video streaming of road network imagery

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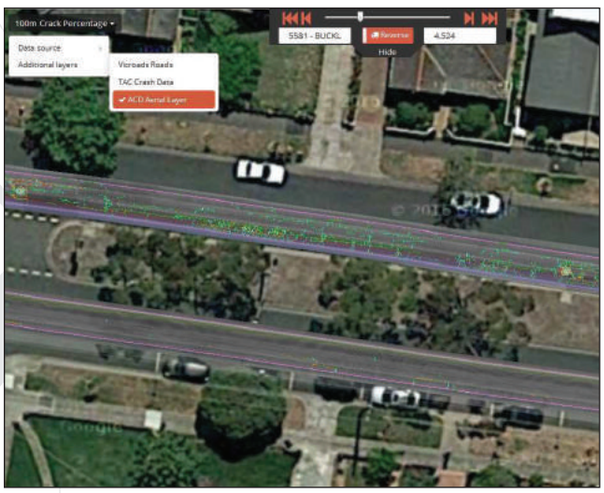
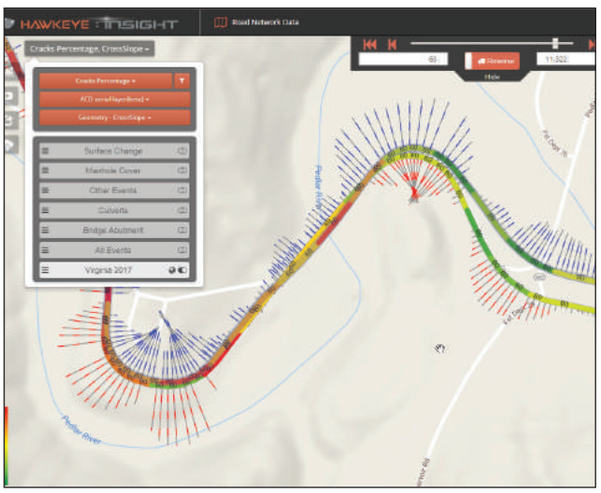
WEB-BASED DATA AND IMAGE VIEWING TOOL

Features

- Display:
  - Roughness
  - Texture
  - Cracking
  - Rutting
  - Geometry whiskers
  - Visual defects
  - Deflection bowl and slope
  - Cracking and pavement image map overlay
  - Toggle crack maps and calibration grid
  - Year on year data comparisons
  - High speed video playback up to 300km/h
- Navigation:
  - Search by Road ID, name, section, chainage, address map or Hawkeye URLs
  - Move by frame or drag pin on map
  - Instantly switch which side of the road is being viewed
- Export:
  - Hyperlinks to share location and points of interest
  - Tabular, charting and csv exports
  - Shapefile exports
  - Image exports
- System capabilities:
  - Accessible on multiple platforms
  - Supports Firefox, IE, Chrome and Safari browsers

For more information, visit www.hawkeyeinsight.com





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