

### **SIGHTLINE™**

ViaPlus Image Review Services

ViaPlus Sightline™
comprises automatic and
manual image review
processing.

Together, these modules create the best results for posting data transactions and enable toll road agencies to boost revenue collection by preventing leakage.

- ViaPlus Sightline<sup>™</sup> can easily interface with existing back office or host systems.
- Sightline™ integrates diverse business rules in its intelligent queues management system to provide users with tasks appropriate to their expertise levels.
- Intelligent and innovative dispute resolution processes

### **Quality Assurance & Control**

ViaPlus' two-tier audit system is continuously tuned and underscores our commitment to superior service delivery and operational efficiency.

Sample transactions selected based on predefined criteria undergo first level review, where inaccurately reviewed transactions are identified.

A second level review ensures the highest degree of accuracy in the transaction review process.

### THE SIGHTLINE™ DIFFERENCE

### What Sets ViaPlus Apart

#### **Our Team**

On average, ViaPlus' core Image Review team each has 20+ years of toll **industry experience** 

Our team members have implemented image review systems for ETC projects around the country including TxDOT, BATA/FasTrak, LA Metro, Fort Bend, NTTA, and multiple state agencies in the E-ZPass network

### **Our References**

Our customers minimize revenue leakage by reprocessing old transactions that could not be collected by previous vendors.

#### Case Study

- For one agency, ViaPlus reprocessed ~9M previously unidentifiable transactions from another image processing system
- After ViaPlus successfully posted 45% of the transactions, the agency could invoice over \$8M, of which over \$2M was immediately posted revenue

### **Our Operations**

We prioritize **operational efficiency and continuous improvement** for optimized revenue collection:

- Biannual tuning and upgrade of the OCR engine
- Monitoring new DMV plate designs (new plate syntax)
- Continuous feedback to lane provider of camera system performance to minimize unreadable images and reduce rejection rate.



### SUPPORT FOR HIGH ACCURACY REQUIREMENTS



High accuracy using
Artificial Intelligence and
Machine Learning-based
license plate recognition



Recognition techniques for character/state, versus deduction techniques used in traditional systems



Continuous improvement in system accuracy and throughput via machine learning and a dynamic feedback loop



Performance testing up to 4x required load with horizontal and vertical scaling capability



Multi-layered approach to image enhancement and quality settings – system-based and agent-specific



Inherent adaptability with AI/ML and OCR upgrades to address new plate syntax and plate designs.

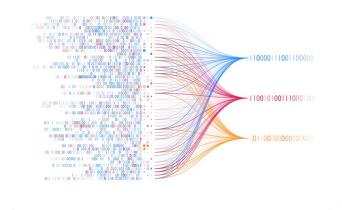
### **IMAGE PROCESSING**

Two Modules



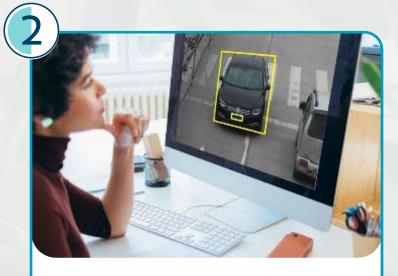
# Automated License Plate Recognition (ALPR)

OCR engine automatically identifies and reads license plates to reduce the transactions needing manual processing.



#### **AI-Based Functionality**

Deep-learning neural network processes images the traditional OCR engine cannot read. Can process large volumes from multilane, multi-camera systems.



### Manual Image Review (MIR)

Human reviewers process any unidentified images. ViaPlus workflows have optimized keystrokes, UI-optimized screens, and configurable business rules to enable quick identification.

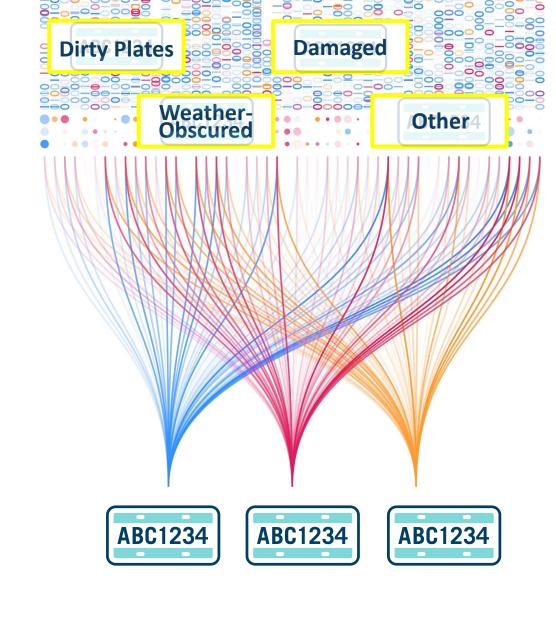
# AUTOMATIC LICENSE PLATE RECOGNITION

Deep-learning neural network processes images the traditional OCR engine cannot read (e.g., dirty plates or bad weather)

Enables processing of large volumes from multi-lane, multi-camera systems.

Al-enhanced engine is utilized for automated image processing, which provides an accuracy rate of at least 99.9%

Processed results used as feedback to AI engine for further accuracy enhancements and ongoing system improvements.



## **ROV LOOKUP**

# **Invoicing for Pay-by-Mail Tolls and Administrative Fees**

Registered Owner Vehicle lookup services can be obtained via direct access to the in-state DMV, or by partnering with a third-party provider increasing revenue collection opportunities.



# **DMV Registered Owner Lookup**

Module that can interface with Sightline™ Image Review to provide an alternative to obtaining expedited registered owner information from the in-state DMV Data Mart.

### **Out of State DMV Lookup**

ViaPlus partners with an experienced provider for state DMV rules and collecting vehicle-based debt.

This partnership offers the advantage of an all-inclusive approach for image review processing.

### FUNCTIONALITY ENHANCES PERFORMANCE, ACCURACY

ViaPlus Optimizations

Shared **knowledge base** distributes updates to team on new plates, special handling

Image enhancement controls for brightness, contrast, gamma, auto enhanced quality image, zoom, ROI focus

User-**configurable** image quality enhancements

Intuitive dashboards and reporting

Robust **machine learning** with manual ground truth



**Double blind** review: all transactions are reviewed by two separate processes

Enhancing image quality via pre-processing function



Improved performance of ROV lookup

Image quality feedback loop with roadside vendor



System learning for misread/ unreadable plates through ALPR process cycle

Ability to identify and flag sensitive/exception plates for additional processing, review, and scrutiny



### ADDITIONAL FEATURES FOR REVENUE CAPTURE



Extensive staff/system knowledge of license plate design and syntax



Multi-level
user expertise
(novice, advanced,
super user)



Continuous OCR engine tuning



System user support to identify easilyconfused plate characters



System logic that minimizes reject codes / miscodes



Near real-time DMV data comparison for manual review transactions

