Intelligent e-Challan Management Software

Adding sense to surveillance.
Intelligent e-Challan Management Software

Videonetics’ “Intelligent e-Challan Management Software” (ICMS) is open architecture software that integrates with Intelligent Traffic Management System applications suite offering efficient management of e-challans generated to penalise traffic violations like red light violation, stop line violation, speed violation, etc. Additionally, it allows the operator to include other violations such as no helmet, triple riding, etc. as and when visually detected during the validation of challans.

Unified Systems Architecture

Figure 1 shows overall systems architecture explaining the working of software. This shows the unified system can take input from field handheld devices, Intelligent Traffic Management systems, as well as manual input from other surveillance systems to generate and manage challans.

**HIGHLIGHTS**

- National Vehicle Database (NIC VAHAN) Integration
- Ready APIs for integration with regional and international vehicle database
- Automated, Semi-Automated & Spot mode of operation
- Secure Web Access
- Mobile User Authentication & Mobile Device Authorization
- Challan Traceability
- Detailed MIS reports & statistics
- Multiple challan printing options

**Figure 1: Unified Systems Architecture for use of intelligent e-Challan Management Software**
Features of ICMS

**Ease of Operation**
- Intuitive UI for ease of operation.
- Central Web based interface for administration, user management, challan management and payment status management.

**Ease of Installation**
- Web based central application which can be easily installed in any web servers.
- Android based mobile App which can be installed in any compatible mobile device - smart phone, hand-held device.

**Vehicle Database Integration**
- Integrated with NIC VAHAN Database, this facilitates the fetching of vehicle owner’s details and vehicle details from RTO databases.
- Web API based framework available to integrate with local, regional and international vehicle databases.

**Scalability**
- Web-service based architecture to support receipt of data from different system.
- Client-Server based architecture is useful for parallel operation of multiple field devices.
- The central software for challan management is horizontally scalable with IT infrastructure.

**Security / Cyber-Security**
- All the communication to and from the server is fully secured and protected to eliminate possibility of eavesdropping.

**User Management**
- Pre-defined user roles like Challan Admin, Challan Supervisor and Challan Operator available.
- Custom user roles of any number can be added by Challan Admin.
- Role based device user authentication.

**Challan Management**
- Each challan is identified by unique identifier assigned to it when challan is generated.
- More than billion challans can be uniquely identified and searched.
- Authorized user can search history of offences - device wise, location wise, offender wise, device-user wise, generation type wise.

**Challan Traceability**
- Each challan is identified by unique identifier for future references.
- Challan tagged to issuing officer’s details.
- Challan with accurate time stamp.
- Challan generated using handheld device can be tagged with GPS location to accurately trace the location of offence.

**Digital Signature**
- Challans are signed digitally by Digital Signature of the responsible authority.

**Detailed MIS Reports**
- Detailed MIS reports available from central location.
- Standard reports based on type of offence, location, officer, offender readily available.

**Pictorial Evidence**
- Each challan is embedded with event images as evidence of the offence in central mode of operation.

**Manual Challan Generation**
- Upload images and text to generate challans in semi-automated mode.
- Web based data entry for manual challan generation.
- Control room officers can generate e-Challans for the violations observed in Videonetics IVMS footage. Event image and video clip from Videonetics IVMS is used as evidence.
Device Management
- Device is pre-registered and managed centrally

Security
- OTP (one-time password) based user authentication

Device Hot listing
- Hot listing and black listing of devices by IMEI from central location by authorized personnel

Spot Challan
- Spot challan is generated by traffic officer at point of violation

Offence History
- For an offender, detailed history of previous offences displayed if any

Frequent Offence Detection
- Displays frequent offence types in hand-held devices

Contextual Help
- Full context based help is available to the officer for easy operation of the software

Offline Operation
- Offline session per user is maintained in the handheld device. Once authenticated the user can continue to work even if the connectivity is lost.

Additional Features in Spot operation using hand-held devices

System Requirements

<table>
<thead>
<tr>
<th>Server Specifications</th>
<th>Workstation Specifications</th>
<th>Server(OS shall be server grade)</th>
<th>Workstation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel Xeon Quad Core Processor, 16 GB RAM, 1 TB HDD, 4 x 1 Gbps NIC</td>
<td>4 Core, 2.8 GHz, 16GB RAM, Intel® Iris™ Pro Graphics 580, Intel Quick Sync video (preferable)</td>
<td>MS Windows: Windows 64-bit Server OS</td>
<td>MS Windows: Windows 7 onwards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Linux: Ubuntu 64 bit 14.04 LTS</td>
<td></td>
</tr>
</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>Product Code</th>
<th>License Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITMS-ECH-INT</td>
<td>ICMS software license1</td>
</tr>
<tr>
<td>ITMS-RDB-INT</td>
<td>License to integrate ITMS with RTO DB.</td>
</tr>
<tr>
<td>ITMS-CLA</td>
<td>ITMS client license to view live &amp; archived video, events, generate MIS reports.</td>
</tr>
<tr>
<td>ITMS-ECH-CLA</td>
<td>ITMS e-Challan client license for Event Validation, Challan generation, printing etc.</td>
</tr>
</tbody>
</table>

1 ICMS software integrates with existing ITMS suite of applications like central server application, ANPR, RLVD, Speed Detection to operate in central automated mode to generate e-Challans. Central semi-automated mode of operation requires ITMS central server application to generate e-Challans.

VIDEONETICS – A FAST-GROWING INDIAN PIONEER
With many prestigious deployments worldwide, Videonetics leverages its leading-edge technology to power video surveillance systems, reducing costs and improving performance for customers. Our enterprise-class integrated visual computing platform offers the flexibility to scale-up, and being modular, allows vertical-specific plug-in applications.

For enquiries, please contact:
e-mail: marcom@videonetics.com
VIDEONETICS TECHNOLOGY PRIVATE LIMITED
Corporate Office: Plot 5, Block BP, Sector V, Salt Lake City, Kolkata 700 091
T: +91 33 6661 0300
Gurgaon office: 1124-1125, JMD Megapolis, Sector 48, Sohna Road, Gurgaon – 122 018
Ph: +91 124 4279995
www.videonetics.com