TECHNOVAA
Experience the power of KNOWLEDGE

TMS PRESENTATION

BY TECHNOVAA SOFTWARE & HARDWARE SOLUTION PVT LTD

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INTRODUCTION

- The Company **TECHNOVAA SOFTWARE & HARDWARE SOLUTION PVT. LTD..** Our Organization works in all different streams regarding of Integration/simulation of hardware related to Highway solution (including of software, systems, Electrical). Technovaa is competent with technically to solving TMS/ATMS issues. Traffic safety is the biggest priority for us, towards many but getting a solution has always remained as question mark, Technovaa is committed to resolve issues through technology, R&D and products. We have to done various Type of projects for Toll Plaza and highways with Different organization according to their client's management like **NHAI, MORTH, MPRDC, MSRDC, TNRDC, RIDCOR, PWD** and etc. The Core area of Technovaa build strong system with fastest information process and with low maintenance cost. We have a technical team to give performance in all different areas. Including of TMS/ATMS software is totally customizable according to concessionaire requirement with effectiveness & Accurately at the point of Satisfaction.

OUR MISSION

- Technovaa developing sophisticated end-to-end Toll Road Management solutions to address the challenges faced in Tolling sector. Our company has a rich and diverse experience in managing toll plazas. Our toll management software is customizable and user friendly. In addition, our staff is expertise's in all type of hardware integration, establishing public/private networks based on Wi-Fi or LAN, AVCC with profile Based, Advance Barrigate System. setting up surveillance system (like Camera IP/IR/CCTV) . Also provide Online Database Management system for all toll connectivity
- Our mission is to provide innovative, comprehensive, and cost-effective toll consulting services and solutions to toll authorities and concessionaires. We have been managing more than 10 toll plazas many other parts of India. We are having large Market in Annual Maintain Contract (AMC) regarding of toll system, we have installed over 150 cameras in 11 locations integrated with AMC.
- We have a team of highly qualified professionals comprising of software, hardware and network engineers, and they enable the company to offer superior services.

PRODUCT & SERVICES

- Advance TMS system.
- Highway ATMS system.
- GPS based Tolling Device and Management
- Advance/Automatic Parking System.
- AMC services for any kind of transportation installation at booth manner comprehensive & non-comprehensive.
- Online support services for any kind of problems related to tolling system 24X7.
- Installation of Plaza, Booth and canopy Electrification.
- Highway Electrification including of street light and High Mask.
- Installation of vehicle Identification camera & DVR, NVR.
- `Installation of electronic ticketing machine with customizable software with barcode.
- Industrial hardware integration software.
- Advance Traffic Survey with ATCC based.

✓ Security Features

- The System has comprehensive security features.
- Login and logout of operators with authenticated user name and password which are created from Toll Administrator
- Advance login system with biometric technology.

✓ Toll Database Server (TMS).

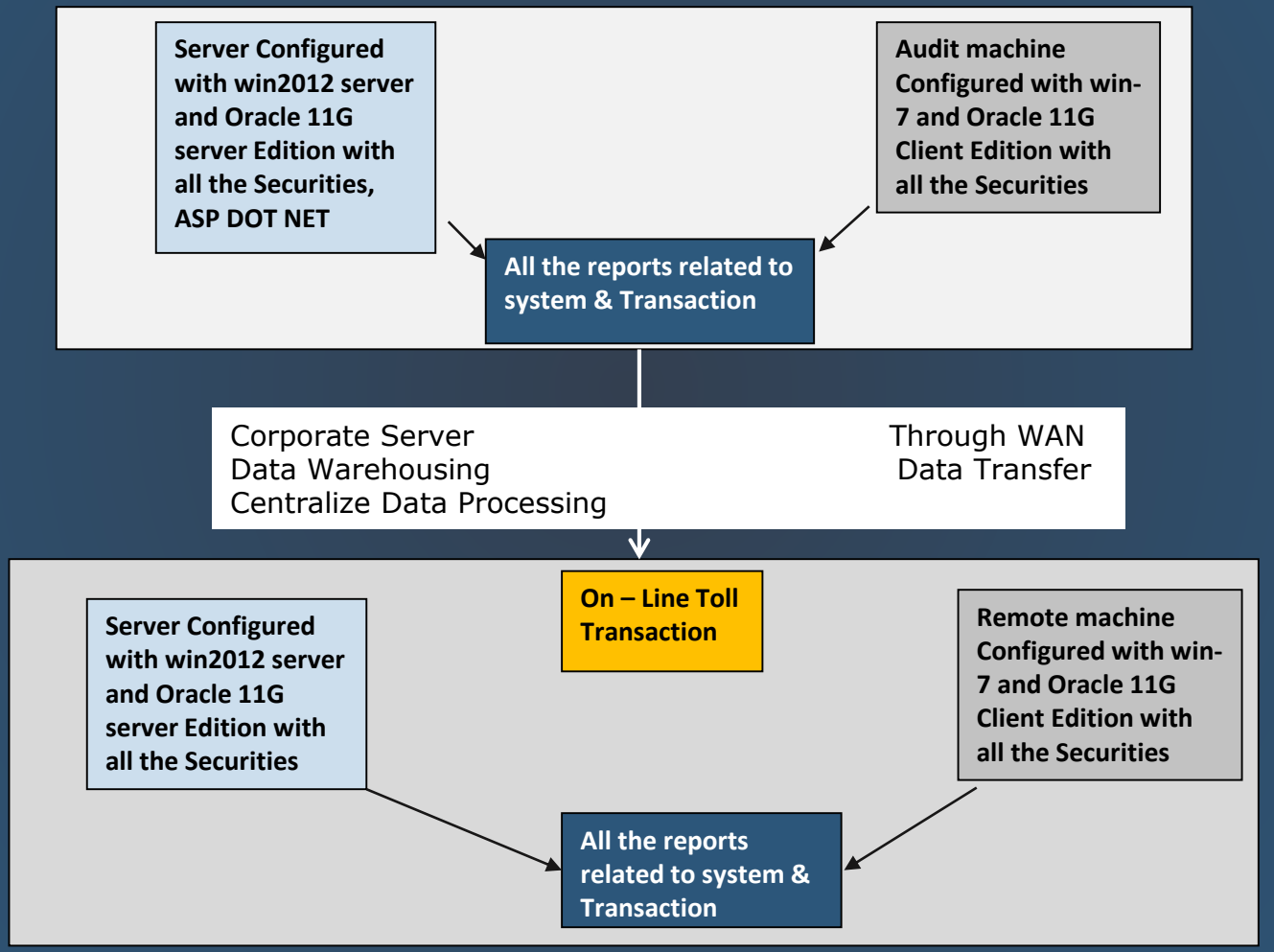
- All the Master Data is received from TMS Server at the beginning of the Shift
- Sensitive reports are fired based on access permissions.
- Separate AVCC database blog, Even working in condition of if lane closed.
- The Vehicle Registration Number and Journey count is displayed on LED Display board.

✓ Enterprise Integration Capability

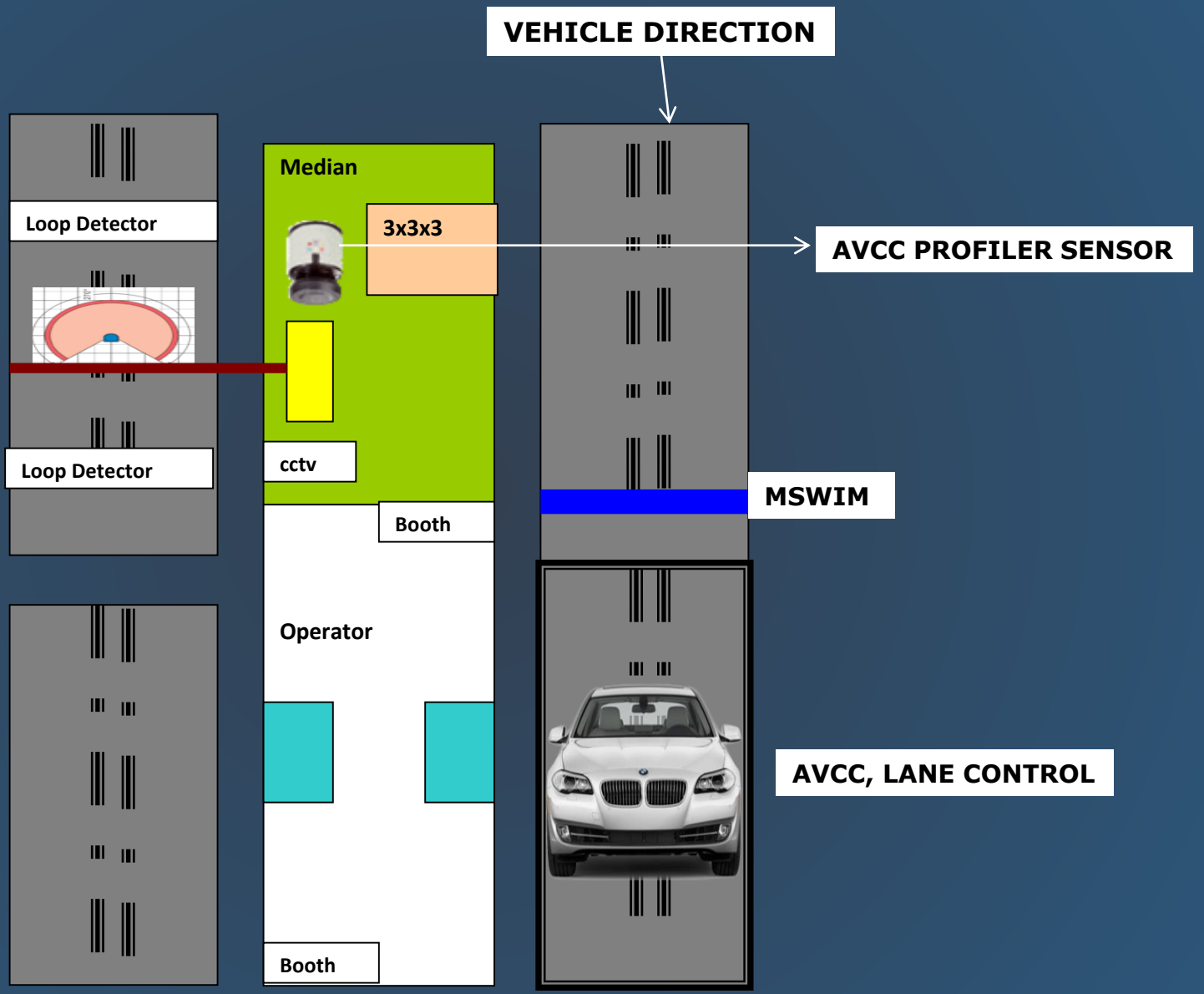
- Connectivity to Corporate Server through Internet or VSAT
- Connectivity to Corporate Server through Internet or VSAT
- Protocol is SMTP on TCP/IP.
- Secure 128-bit Encryption to protect sensitive information.
- All Toll Plaza system Operations can be monitored and controlled from one corporate location through the advance corporate module.

PLAZA LAYOUT & WORKING PRINCIPAL

PRODUCT & SERVICES



TECHNOVAA


VEHICLE DIRECTION
Median
3x3x3
AVCC PROFILER SENSOR
Loop Detector
Loop Detector
cctv
MSWIM
Booth
Operator
Booth
AVCC, LANE CONTROL

TMS HARDWARE SCOPE

The Lane controller is located in the tunnel / tollbooth. Installed with

- Lane Computer with Advantech/Industrial board,
- Lane power supply with SPD and separate MCB’s,
- AVCC/Traffic light/OHLS/Barrigate Compact Controller with micro processor based,
- Different Power Supply with proper socket connectivity,
- Solid State Relay for different external devices,
- All the devices connected and communication establish with Ethernet port

It acquires the lane data & data from through fastest que of following lane Equipment's and transmits to the Plaza Server in real time.

- Automatic high Speed Barrier
- User Fare Display
- RFID with directed frequency level
- Overhead Lane Signal
- Transaction/LPC IP based camera
- Traffic Lights
- WIM with bending Plate
- Vehicle separator, etc.

OUR UNIQUE FEATURES

- Biometric Authentication for every user.
- Module Authentication as per the designation.
- Single Controller to manage all the plaza hardware / equipment independently.
- Controller communicates and transfers data through the Ethernet port very efficiently.
- Each transaction is mapped online for all lanes in single screen.
- After completion of validation, Cash-up is performed.
- Transactions can be recorded even if any vehicle passes through the close lane.
- Dynamic reports can be filtered according to User, Lane, Shift, Date, Month. Further customization as per the requirement.
- We provide SCADA (supervisory control and Data Acquisition) technology for online monitoring of hardware connectivity.

OUR CONTROL PANEL

FRONT VIEW

VOLT METER

POWER INDICATION RED/ GREEN

LOCK AND KEY

OUR CONTROL PANEL

INTERNAL VIEW

Exhaust fan

Micro controller

MCB/SPD for panel supply and Devices

Lane PC with Industrial Board

AC/DC Supply

Devices Connector

LOOP Detector

TECHNOVAA TMS PANEL

Technovaa design & develop the control panel including of various micro controller based devices with power supply, communication ports for each devices and make capable to integrate with many electronic devices for analog and digital data output.

- Control Panel based on PLC micro-controller device works with channel wise to rectify the laser beams and provides output in profile image (telegram method).
- The panel doesn’t contain any PCB card base signal input/output circuit.
- The control panel communications based on the Ethernet port, very fast data transition without any interruption and secure data for all the devices.
- Control panel installed with serge protection device, separate MCB and RCB Voltage controller APFC to protect each devices, also reduce the down time of the function.
- All the devices put into the panel as a plug - n - play manner, So the Installation and maintenance is very easy to understand and execute.

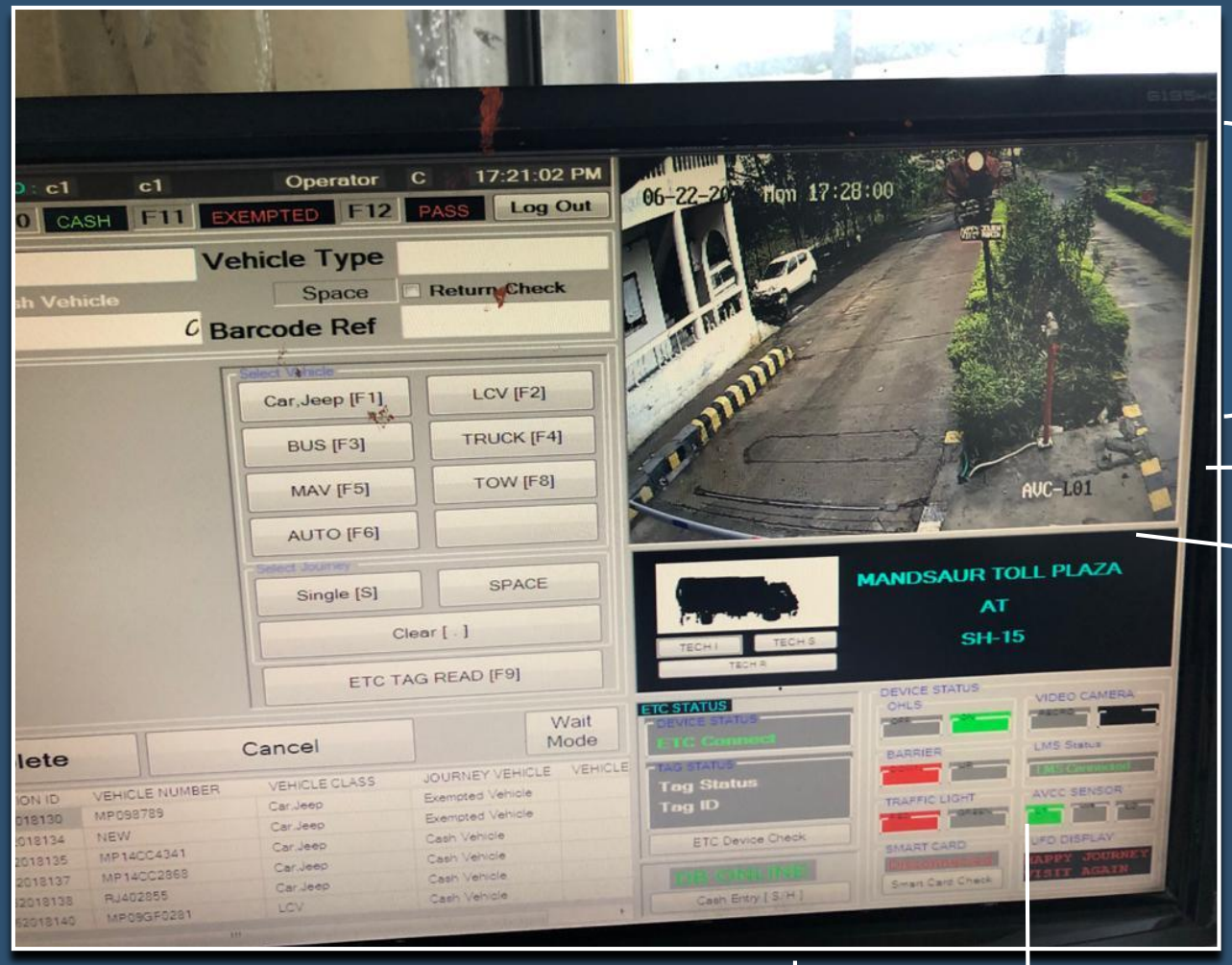
SOFTWARE SCOPE TMS

- Technovaa has self developed Software, with platform of C # and Oracle as database, as per norms of NHAI Technovaa develop and implement the TMS, which is suitable to integrate all hardware device which install at toll plaza and highway management system, TMS upgradation happens time –to – time according to the technology upgradation and client requirement.

- Technovaa TMS is based on --

  - User Friendly
  - Software Integrity & Security
  - TMS modules (Lane software, Server Database, POS, Cash-Up, Admin, Reports & Remote Etc.)
  - SCADA supported TMS for regular values of each device.
  - Integration of surveillance system into the TMS
  - . Technovaa Software structure easy to install and maintain
  - Smart card, RFID, Barrigate, IP camera, ANPR Camera, AVCC (Automatic vehicle classification), Bar-code, UFD (User Fare Display), VMS (Video Management System), QR-code based integration with the TMS Software

BOOTH MODULE



VEHICLE NUMBER DISPLAY

VEHICLE CLASS CATAGORIES INDEX

PREVIOUS TRANSECTION HISHTORY

LPR CAMERA VIEW

BACKSIDE VIEW

LMS GRAPHICS IMAGES

IN THIS SECTION
WE SHOW ALL THE DEVICES INDECATION
WHICH IS CONNECTED
LIKE
OHLS ,TRAFIC LIGHT
TRANSECTION STATUD ETC

DB ONILE /OFFLINE INDECATION

ETC DEVICES STATUS

ABOUT BOOTH APPLICATION

- This application is safe and secure only authorized person Login criteria.
- User can easily select the Vehicle class/Transaction mode as per given by NHAI/Client.
- Booth application has both module with data process in offline & online, and automatically revert database process.
- Transaction process getting information through all the hardware's stepwise, so it is very easy without any interruption.
- All connected devices indications/process shown in the same window.
- If any wrong step then software open error pop up for user guidance.

ABOUT CASHUP APPLICATION

This module is highly secure, only authorized person can use this application.

Through this module we can assign shift, cash up declaration report generate

In this module we provide various option like

1 Employee Detail

2 Cash up Declaration.

3 Float Assigning

4 Manual Transaction Data Entry.

With more option and filter related to shift/day/moth etc.

REPORTING MODULE

TECHNOVAA(REPORTING MODULE) - [dailycollectionrc]

Revenue Report | Traffic Report | Revenue_Traffic | Pass Details | AVCC Accuracy Report | Login Logout Report | EXIT

Daily Collection Report

Select Date 17/07/2020 Shift ALL Submit

Main Report

PALERA TOLL PLAZA — **DILIP BUILDCON LTD.**

Daily Collection Report Shiftwise

From Date: 17/07/2020 | Shift: ALL | Generated By : admin

Shift	System Collection [A]	Manual Collection [B]	Cancellation [C]	POS Collection [D]			Net E=A+B+D-C	Short [F]	Excess [G]	Gross [E+G]
				MONTHLYPASS	NEWCARD	TOTAL				
A	31,200	0	0	85	100	185.00	31,385	0	5	31,390
B	21,540	0	0	0	0	0.00	21,540	0	5	21,545
Total	52,740	0	0	85	100	185.00	52,925	0	10	52,935

Journey Type	car jeep	LCV	BUS	TRUCK	MAV	AUTO	Total
Exempted Vehicle	67	34	0	0	0	113	214
Mawai Barcode	15	3	1	0	0	0	19
Monthly	55	0	0	0	0	0	55
Single Journey	242	120	5	6	47	0	420
Tollplaza Manual							
TOTAL	**379**	**157**	**6**	**6**	**47**	**113**	**708**

Current Page No.: 1 | Total Page No.: 1 | Zoom Factor: 100%

14:32
18/07/2020

ABOUT REPORTING MODULE

Menu Bar

- Revenue Traffic Report
- Revenue Report
- Traffic Report
- Monthly /concession Pass detail
- AVCC Accuracy Report
- LOGIN LOGOUT DETAIL
- MIS /Comparison/violation
- Additional report as per client requirement

Filter Menu

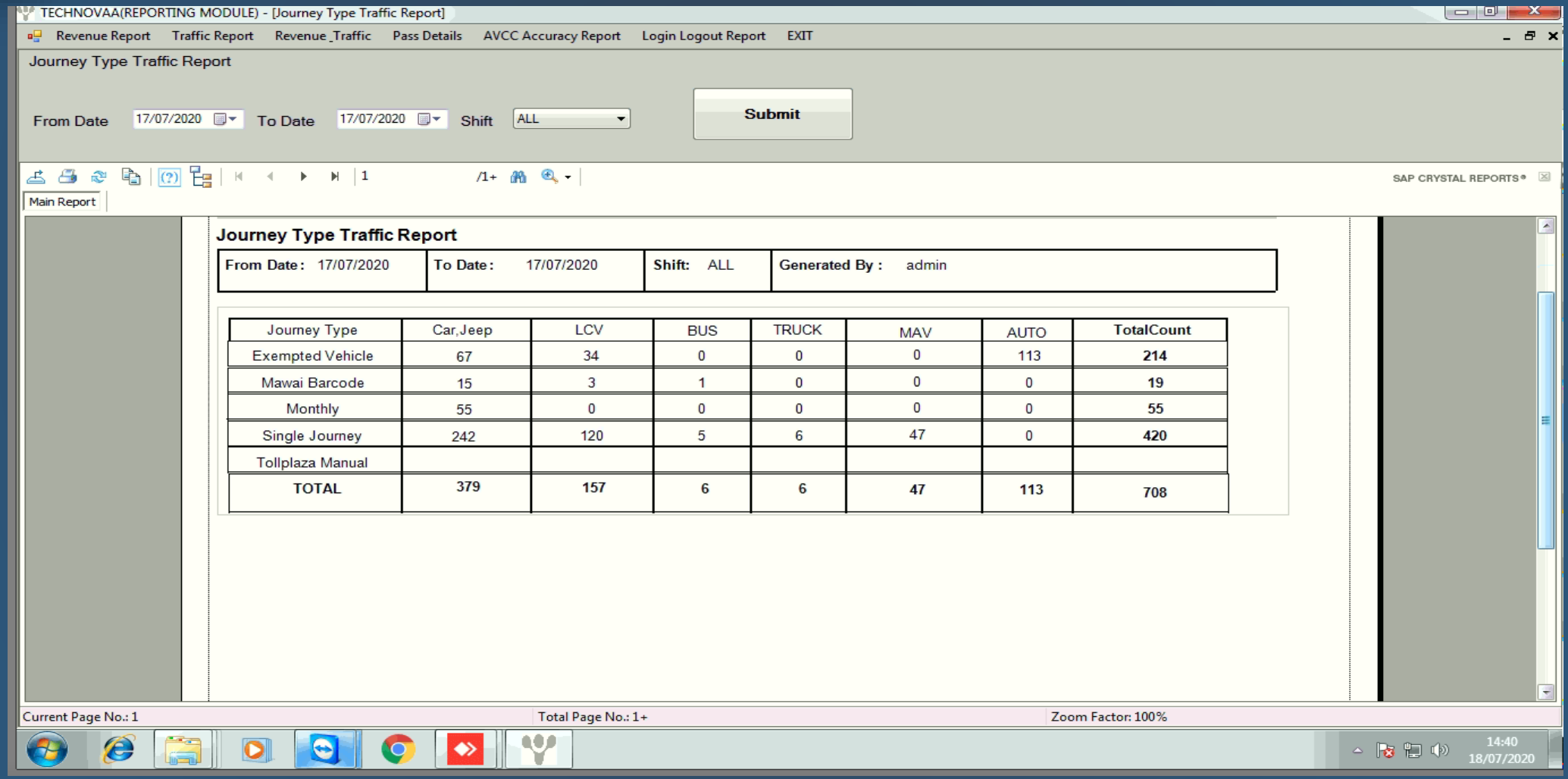
All type of filter is applied here like Lane wise ,Shift wise Date wise and More

TOOLS BAR

By using tools bar we export all the in required format EXL ,Pdf Word .

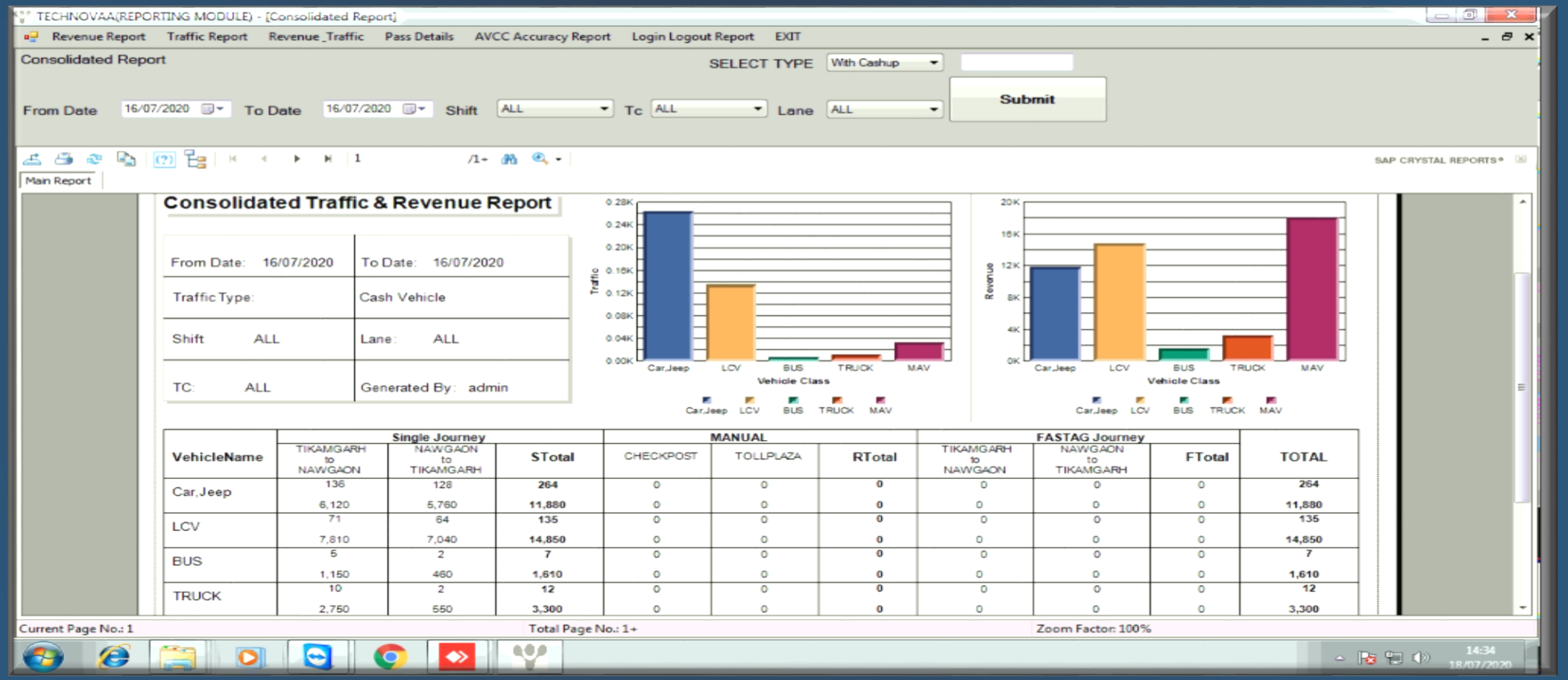
REPORTING

Daily Traffic Report



REPORTING

Consolidated Report



VehicleName	Single Journey			MANUAL			FASTAG Journey			TOTAL
	TIKAMGARH to NAWGAON	NAWGAON to TIKAMGARH	STotal	CHECKPOST	TOLLPLAZA	RTotal	TIKAMGARH to NAWGAON	NAWGAON to TIKAMGARH	FTotal	
Car,Jeep	136 6,120	128 5,760	264 11,880	0 0	0 0	0 0	0 0	0 0	0 0	264 11,880
LCV	71 7,810	64 7,040	135 14,850	0 0	0 0	0 0	0 0	0 0	0 0	135 14,850
BUS	5 1,150	2 460	7 1,610	0 0	0 0	0 0	0 0	0 0	0 0	7 1,610
TRUCK	10 2,750	2 550	12 3,300	0 0	0 0	0 0	0 0	0 0	0 0	12 3,300

REPORTING

Monthly Pass Detail

TECHNOVAA(REPORTING MODULE) - [Monthly Pass Details]

Revenue Report | Traffic Report | Revenue _Traffic | Pass Details | AVCC Accuracy Report | Login Logout Report | EXIT

Monthly Pass Details

From Date 15/07/2020 To Date 18/07/2020 Shift ALL EMPID ALL STATUS ALL Submit

Main Report

SAP CRYSTAL REPORTS®

Vehicle Monthly Pass Details Report

From Date: 15/07/2020	To Date: 18/07/2020	Shift: ALL	Generated By : admin
EMPID: ALL	Pass Status ALL		

PASSID	FROMDATE	TODATE	VEHNUMBER	VEHCLASS	AMOUNT	NEW CARD	OWNERNAME	SMARTCARD	EMPID	SHIFTID	TTIME
A150720147	15/07/2020	14/08/2020	MP16BD0359	Car,Jeep	85	0	SUNILMISHRA	900238	pandey2020	A	15/07/202009:31:06
A160720150	16/07/2020	31/08/2020	MP36C2256	Car,Jeep	0	0	HARSH VARDHAN	900203	admin	A	16/07/202009:35:35
A170720158	17/07/2020	31/08/2020	MP16BD0724	Car,Jeep	0	0	HARI MOHAN	900289	pandey2020	A	17/07/202018:54:02
A150720148	15/07/2020	31/07/2020	MP16D0737	Car,Jeep	85	0	HARINARAYAN AHIRWAI	900294	admin	A	15/07/202014:06:59
A150720149	15/07/2020	31/07/2020	MP36BB1514	Car,Jeep	85	0	SANTOSHKUMAR AHIRV	900178	admin	A	15/07/202014:13:24
A160720151D	16/07/2020	15/07/2020	MP36BB1691	Car,Jeep	0	0	NASEEBAN BANO	900279	pandey2020	A	16/07/202011:06:54
A160720151	16/07/2020	31/07/2020	MP36BB1691	Car,Jeep	85	0	NASEEBAN BANO		pandey2020	A	16/07/202011:14:48
A160720151D	16/07/2020	15/07/2020	MP36BB1691	Car,Jeep	0	0	NASEEBAN BANO		pandey2020	A	16/07/202011:15:13

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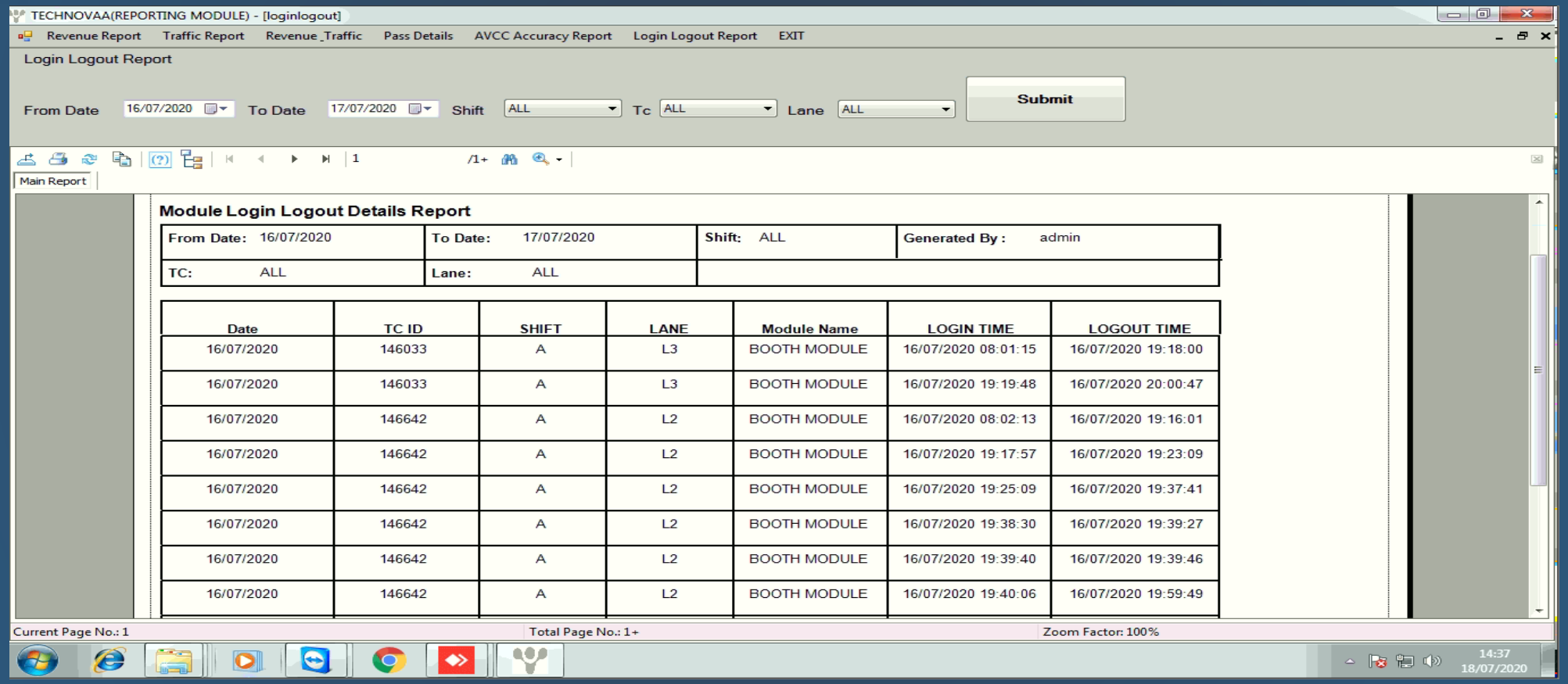
14:40
18/07/2020

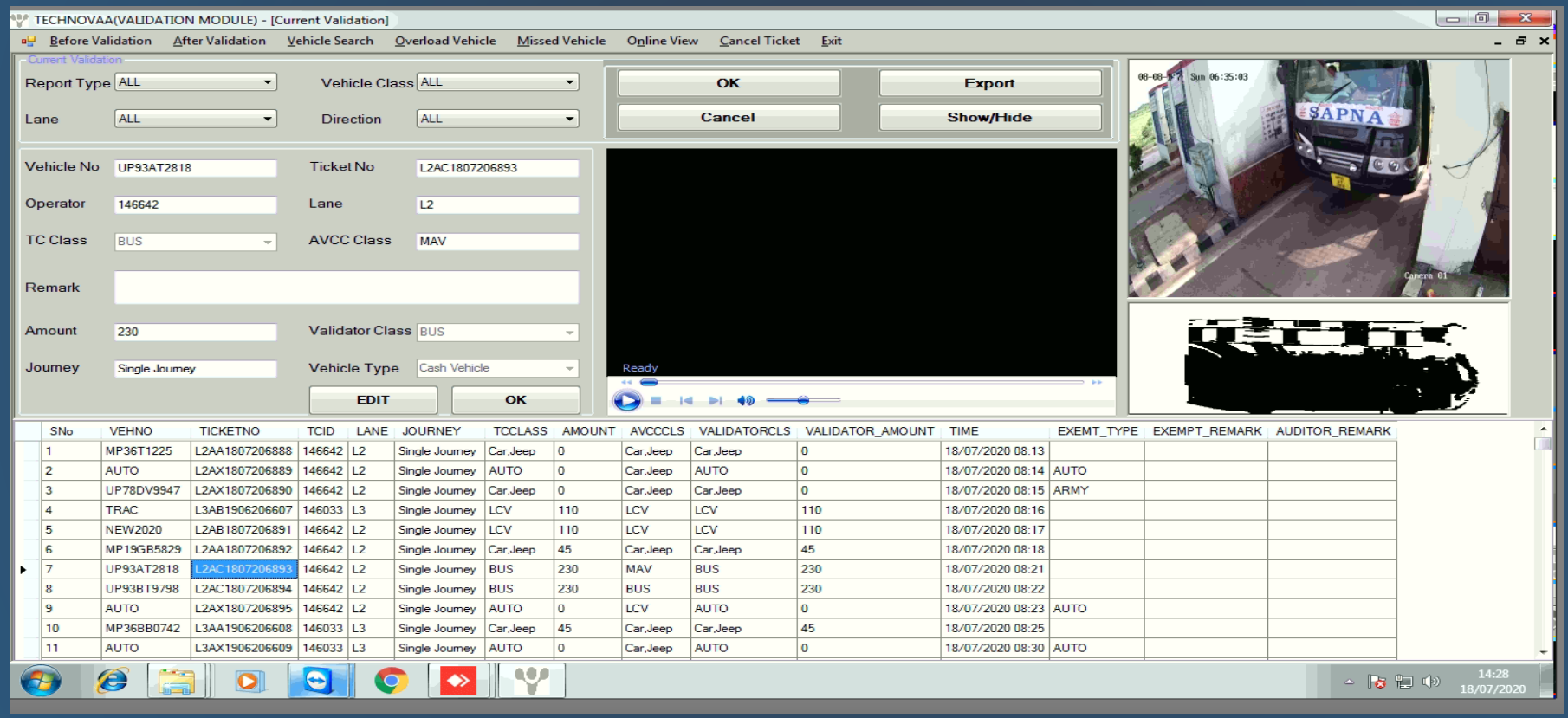
REPORTING

Login Logout Details



REPORTING

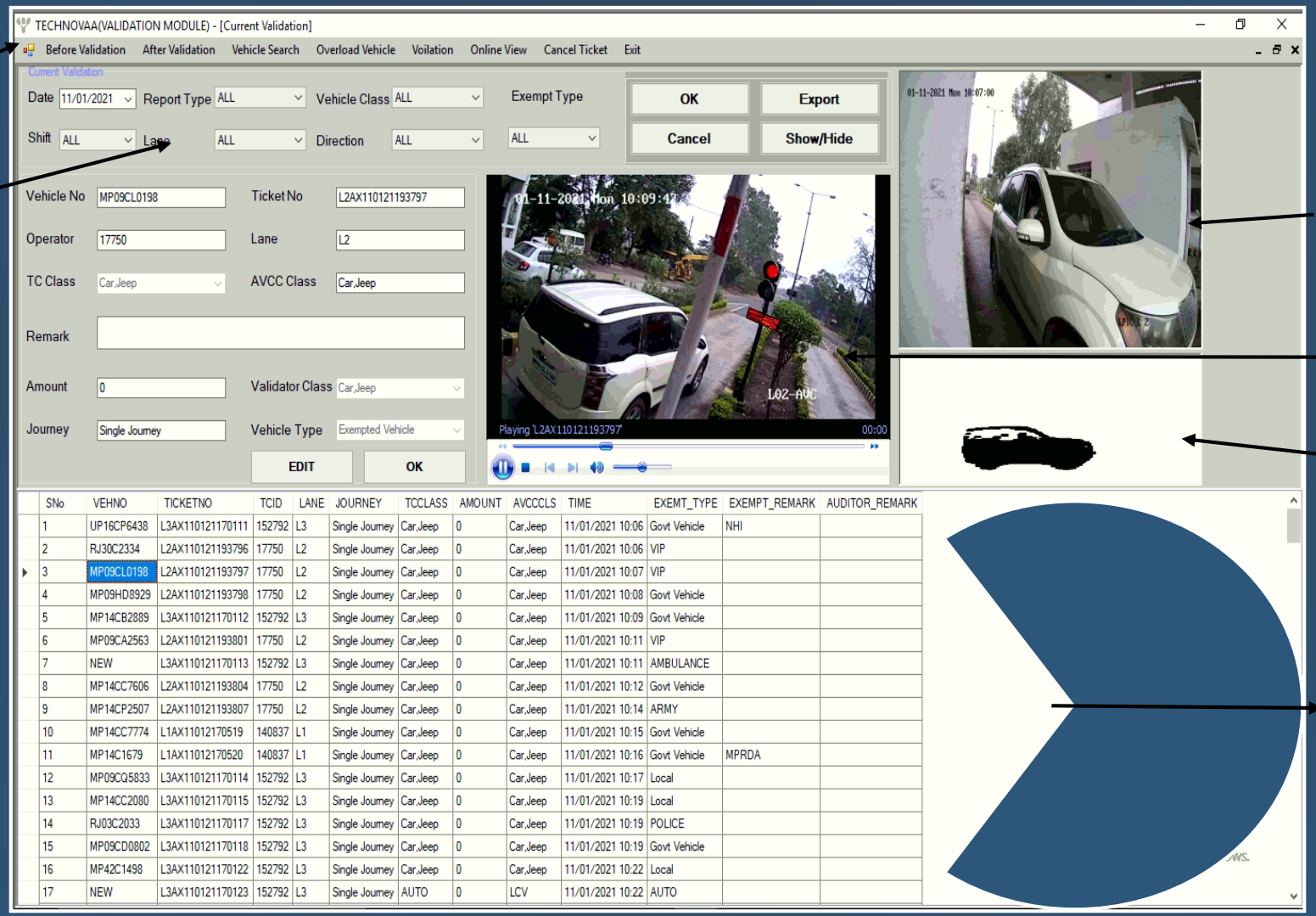
Current Validation



AUDIT MODULE

Menu Bar

Filter Menu



SNo	VEHNO	TICKETNO	TCID	LANE	JOURNEY	TCCLASS	AMOUNT	AVCCCLS	TIME	EXEMT_TYPE	EXEMPT_REMARK	AUDITOR_REMARK
1	UP16CP6438	L3AX110121170111	152792	L3	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:06	Govt Vehicle	NHI	
2	RJ30C2334	L2AX110121193796	17750	L2	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:06	VIP		
3	MP09CL0198	L2AX110121193797	17750	L2	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:07	VIP		
4	MP09HD8929	L2AX110121193798	17750	L2	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:08	Govt Vehicle		
5	MP14CB2889	L3AX110121170112	152792	L3	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:09	Govt Vehicle		
6	MP09CA2563	L2AX110121193801	17750	L2	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:11	VIP		
7	NEW	L3AX110121170113	152792	L3	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:11	AMBULANCE		
8	MP14CC7606	L2AX110121193804	17750	L2	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:12	Govt Vehicle		
9	MP14CP2507	L2AX110121193807	17750	L2	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:14	ARMY		
10	MP14CC7774	L1AX11012170519	140837	L1	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:15	Govt Vehicle		
11	MP14C1679	L1AX11012170520	140837	L1	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:16	Govt Vehicle	MPRDA	
12	MP09CQ5833	L3AX110121170114	152792	L3	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:17	Local		
13	MP14CC2080	L3AX110121170115	152792	L3	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:19	Local		
14	RJ03C2033	L3AX110121170117	152792	L3	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:19	POLICE		
15	MP09CD0802	L3AX110121170118	152792	L3	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:19	Govt Vehicle		
16	MP42C1498	L3AX110121170122	152792	L3	Single Journey	Car,Jeep	0	Car,Jeep	11/01/2021 10:22	Local		
17	NEW	L3AX110121170123	152792	L3	Single Journey	AUTO	0	LCV	11/01/2021 10:22	AUTO		

Front Image Display

Back Axel Video

Graph Images

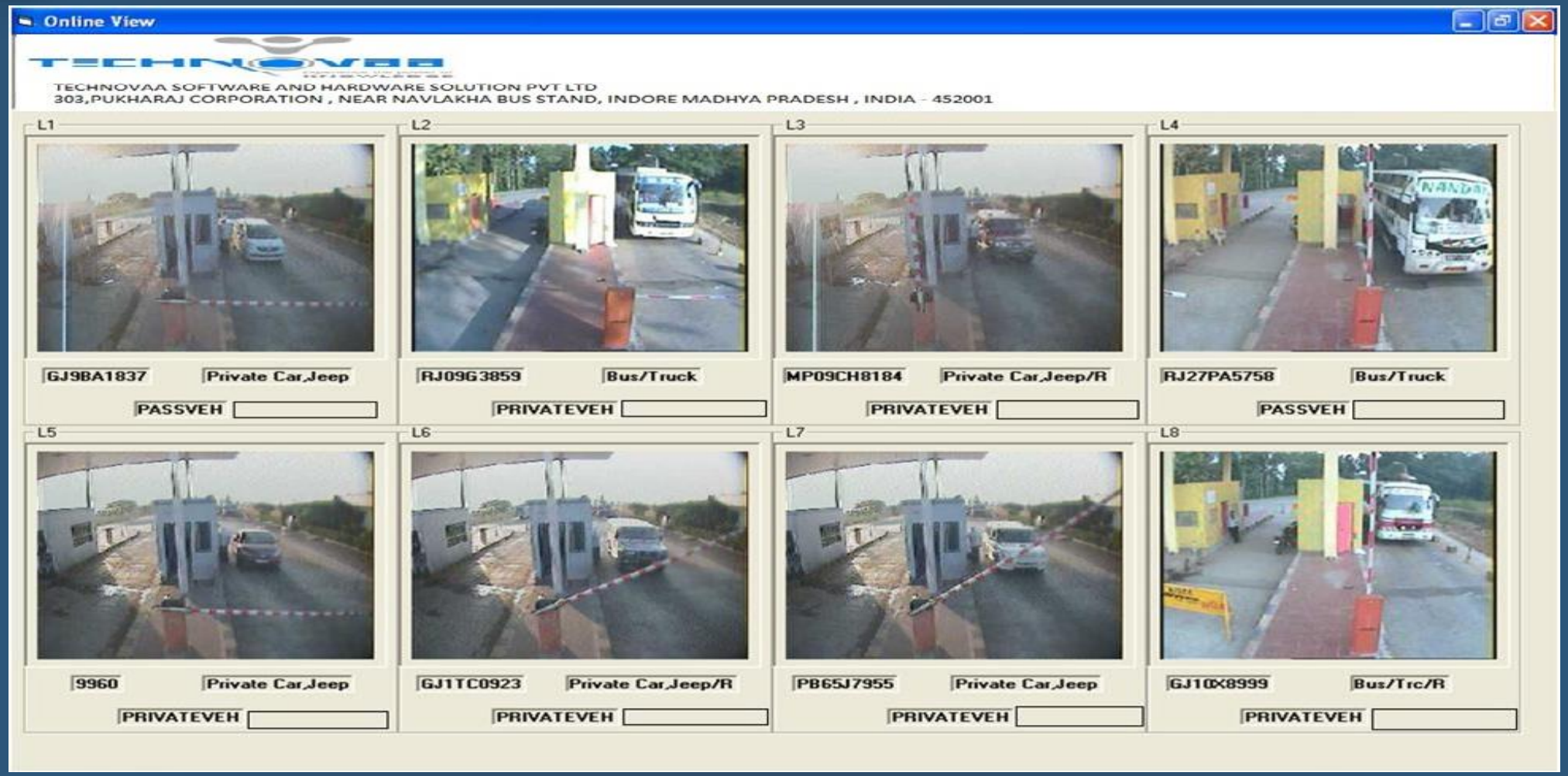
Transaction View

ABOUT AUDIT APPLICATION

- In Validation module only authorized person allowed in this auditor audit (validate) all the transaction.
- Auditor module also available with various addition features like Cancel Ticket, Online View, and Vehicle search ETC Transaction detail all type transaction detail with multiple date, Time and class filter etc.
- In this module we can export all the transaction in required format on single click. Like Excel, PDF ,word etc.
- Technovaa special feature is Live monitoring on single window through online view, can communicate with lane

AUDIT MODULE

Live Monitoring



DATA MANAGEMENT SYSTEM

1. Backup Of Data From Database
2. Import Data To Database
3. Export To Excel Sheet From Database
4. Import To Database From Excel Sheet
5. On-Line Data Import from server

OUR VALUABLE CLIENTS

- **NHAI, Kota PIU** – Fatehpur and Similiya Plazas – 16 Hybrid Lanes
- **NHAI, Dausa PIU** – Chilachond and Kondar Plazas – 16 Hybrid Lanes
- **NHAI, Lucknow PIU** – Jalwar-Bahraich Highway – 08 Hybrid Lanes
- **NHAI, Jammu PIU**- Jammu - Kathua Highway -12 Hybrid Lanes
- **Dilip Buildcon Ltd.** – 7 x 6 Lane plazas – Total of 42 Hybrid lanes under MPRDC across Madhya Pradesh
- **H.G. Infra Engineering Limited**, Jaipur – Gumanpur Toll Plaza under Sawai-madhopur NH PIU – 08 Hybrid Lanes
- **H.G. Infra Engineering Limited**, Jaipur – Kundal-Jadhol section of NH-58E, Raj. – 06 Hybrid Lanes with ATMS
- **Tamil Nadu Road Infrastructure Development Corporation project** at Madurai bypass – 3 x 6 Hybrid Lane plazas – Total of 18 Lanes through Trilok Infra, Coimbatore with Electrification.
- **A group of Tata Construction, Adityapur Tollbridge** at NH-33 in West Bengal – 08 Hybrid Lanes with Electrification.
- **Sri Durga Condev Pvt. Ltd.** – Bolangir – Soepur Section of NH-57 in Odisha – 08 Hybrid Lanes with Highway and plaza Electrification.

OUR VALUABLE CLIENTS

- **Mahucon Project Limited-** Nizamabad - Jagadalpur 6-Lane project
- **Barfani Developer-** 6*3 – 18 Lanes under PWD Through Barfani developer
- **Topworth Tollways Limited-** 6*2 – 12 lanes under MPRDC
- **Sukla Construction- 4*4 plaza** – 16 Lanes under MPRDC
- **Shivalaya Construction** - 6*1 Plaza – 6 Lanes with ETC At Devghar (JH) NHAI
- **Shivalaya Construction** – 700 nos. solar street lights in Bhandara (MH)
- **KRDCL** – Haveri-Hangal 6-lane ETC in Karnataka.
- **UPP Tollways Pvt.Ltd**. – 6-Lane ETC installation –Bhind (MPRDC)

OUR VALUABLE CLIENTS

- NHAI
- MPRDC
- KRDCL
- TATA
- Durga Condev
- Trilok Infra
- Dilip Buildcon Ltd.
- Topworth Infra Project
- VKSCPL
- Madhucon Infra Ltd.
- Essel Infra Projects Ltd.
- MBL Infrastructure Ltd.
- Valecha LM toll Road Pvt. Ltd.
- Eagle Deep Infra Ltd.

PROJECT REFERENCE

1. MPRDC –Tech-Head 42-Lanes (Mr. Subodh Rai, 7024124805)
2. NHAI-Tech Manager PIU KOTA 16-L (Mr. Naresh Choudhary, 9829414867)
3. NHAI-Tech Manager PIU DOUSA 16-L(Mr. PushpendRathod, 8527853290)
4. H G Infra 12-Lanes (Mr. Pankaj Garg, 8059956857)
5. Durga Condev 12-Lanes (Mr. Ajit Sahoo, 9937431041)
6. Essel Infra 16-Lanes (Mr. Pradeep Goyal, 9826386580)
7. Jamshedpur 6-Lanes (TATA Himansu Prasoon, 9199200399)
8. Topworth. 16 Lanes (Mr. Ronak Patni, 9479313987)
9. Madurai Ring Road 16 Lanes (Mr. Balachandra Nayer, 9361189190)
10. Dilipbuildcon Pvt. Ltd. 32 Lanes (Mr. K.K.Rao, 6232026604)

TECHNOVAA
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THANKYOU

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