



SICE'S LANE BASED TOLLING SYSTEM

SICE's lane based Tolling System is a comprehensive and modular 3 levels toll collection solution that allows toll road users to pay for the use of an infrastructure with a wide variety of means and modes of payment at physically independent lanes in toll plazas. It allows the operators of a tolling infrastructure the collection of tolls in a totally controlled, auditable and flexible way, assuring that road users pay the amount to be paid and toll collectors declare the amount to be collected.

All 3 levels involved in SICE's lane based Toll Collection System (lane, plaza and control center) can work together or be integrated with higher levels solutions, keeping always the philosophy of robustness, flexibility, capacity and efficiency that have been considered by SICE since the initial tolling installations.

KEY FEATURES OF LANE-BASED TOLL SYSTEM

The SICE's Lane-base Tolling System is a 3 level centralized modular software solution that allows a great flexibility during implementation and operation phases, and a high level of adaptability to different hardware architecture platforms.

Some of the key features that the SICE's Lane-based Tolling System provides to Tolling Operators are as follows:

- Designed to allow an uninterrupted operation for 24 hours a day, 365 days a year
- Traffic flow physically channeled in lanes with or without automatic barriers
- Toll collection in manually assisted, automatic mode (paying at Automatic Payment Machine) and/or dynamic mode (electronic toll collection via tag)
- Flexibility in toll payment means; cash, foreign currency, credit/debit bank cards, concessionaire or professional cards, electronic transponders
- Open, closed and mixed toll schemes
- Pre and/or post automatic classification systems, video-enforcement and LPR systems
- Based on commercial-of-the-self hardware, and in-house software applications
- Liquidation process of toll collectors shifts, passage validation both local and centralized
- Toll plaza supervision in local and/or remote mode
- Centralized validation, consolidation and administration functions
- Plaza-based or Control Centre based reporting capabilities
- Interoperability with other toll systems



LANE LEVEL

Lane Application is the software running on the Lane Controller CPU that handles all the lane elements to allow the following functionalities:

- To Run the checking processes when the lane is starting up
- Detection of transits when the lane is closed
- To handle the opening and the closing of the lane
- Management of all the peripherals and elements that compose the lane
- Reception of remote orders to be executed from the Plaza Level
- Reception of tables from the Plaza Level
- Generation and Storage of information each time a vehicle goes through the lane
- Generation and Storage of information regarding the status of the peripherals
- Transmission of the generated information to the Plaza Level
- To handle the logic that controls the going through of the vehicle in the lane
- To handle the logic that controls the payment methods
- To handle the algorithm to classify the vehicle according to the applicable classes

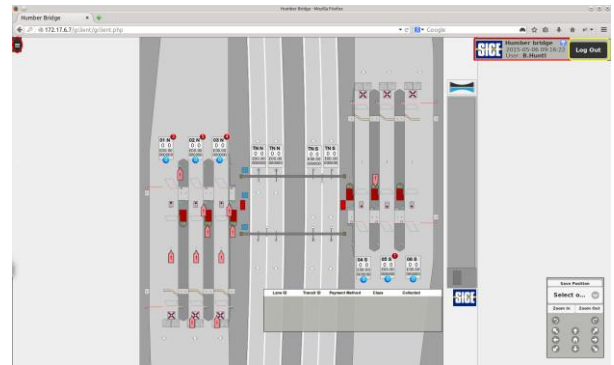


PLAZA LEVEL

SICE's Plaza level application supports both barrier-based lanes and AET Toll Zone transactions.

The main Plaza Application functionalities are the following:

- Transmission and reception to and from the lanes, and to and from the Control Centre
- Data received storage and analysis
- Alarms received from lanes processing/system devices status
- Lists management
- Storage of data transmitted and received to and from Control Centre (redundancy)
- Lanes configuration management
- Plaza Server configuration and reporting management
- Plaza Server monitoring and maintenance management
- Monitoring of the Lane elements
- Time Synchronization management
- Service task management (internal processing)
- Orders to Lane management
- Management of the toll collector cash-up
- Management of the collection pick up



ADDITIONAL FUNCTIONALITIES

Other remarkable features that the 3 levels Lane-based Tolling System of SICE has are as follows:

- Integration of all kind of electronic toll collection protocols and manufacturers
- Integration with several Video Management Systems for synchronized digital video auditory
- Same software application for all kind of lanes in the same process
- Capability of providing hybrid lane-based and open road tolling lanes in the same system
- Provision of auxiliary systems; interphone, general purpose CCTV system, public address, queue detection systems, etc.

