MAINTENANCE AND ASSET MANAGEMENT TOOLS

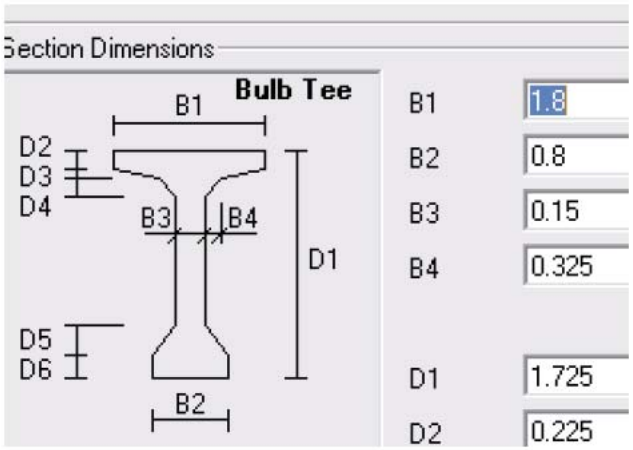
Evaluation tool of permit vehicles for Abertis Highways

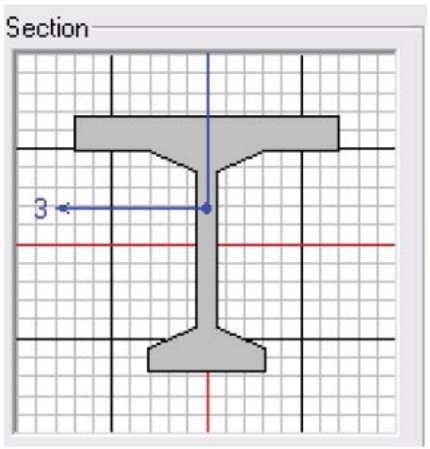
Chile.

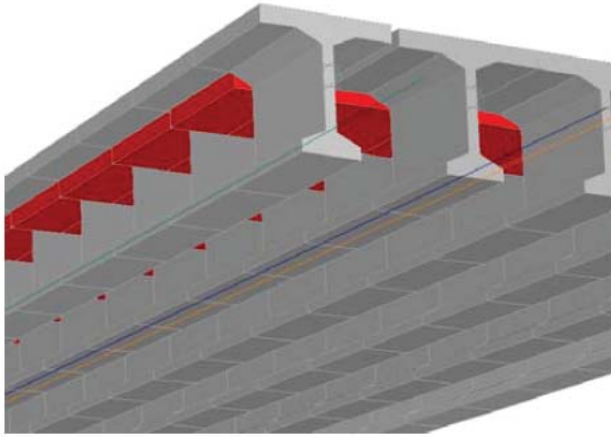
CLIENT	**ABERTIS**
DATE	**2015-2016**
LOCATION	**Chile**
FIELD OF ACTION	**Maintenance and Asset Management Tools**

INES has developed a system for checking the passage of special transport on bridges road networks for ABERTIS.

The tool is integrated into the ABERTIS computerized management system, which is accessible to all employees from different locations. It receives data, performs calculations on a central server and sends the results in minutes.







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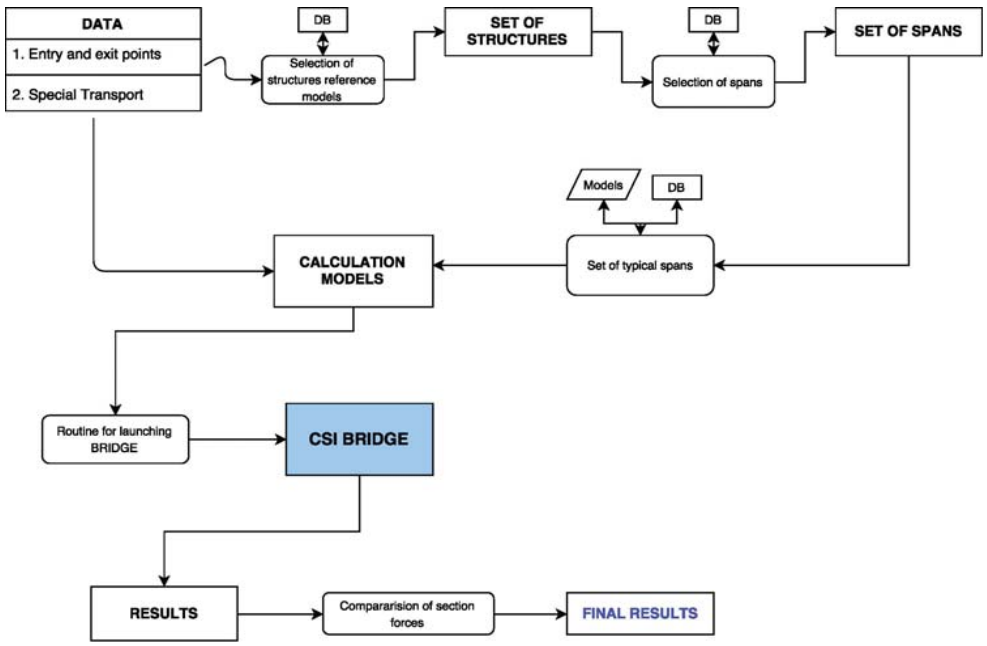
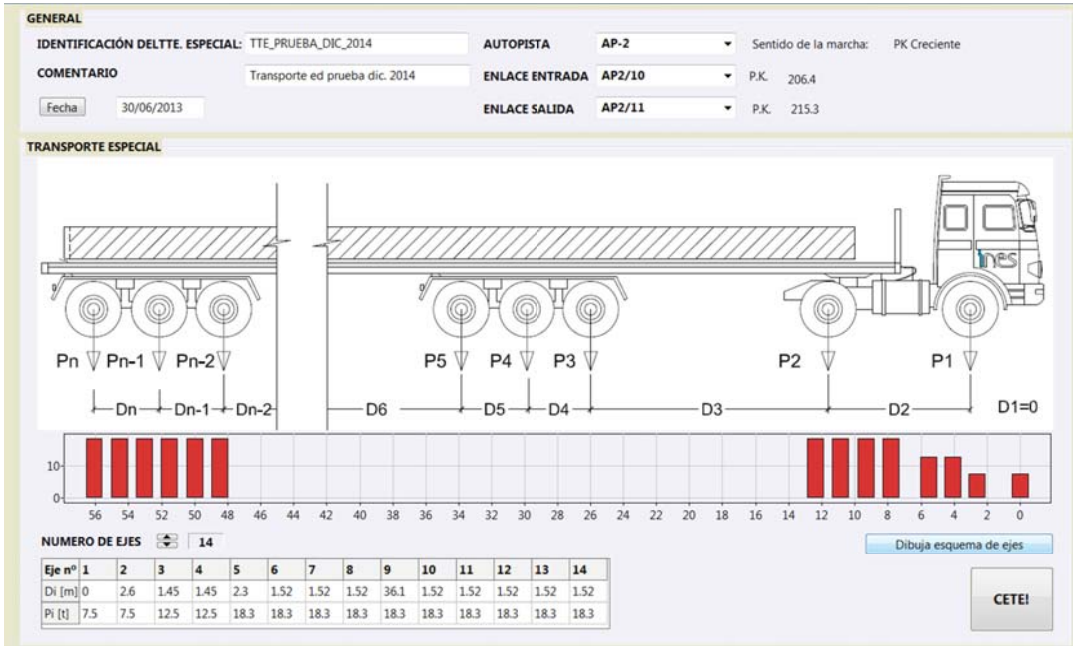


- Passage authorized without restrictions
- Passage authorized with road traffic interruption
- Authorized through the center of the structure and traffic interruption
- Unauthorized

Highways manager should respond quickly to a request for a permit vehicle to cross his infrastructures. The information needed is quite basic: vehicle dimensions, loads per axle and wheelbases, and entry and exit points on the road network.

The application identifies the structures which will be crossed by the vehicle and launch a series of calculations on each of them. The result for each bridge may be one of the following four possibilities:



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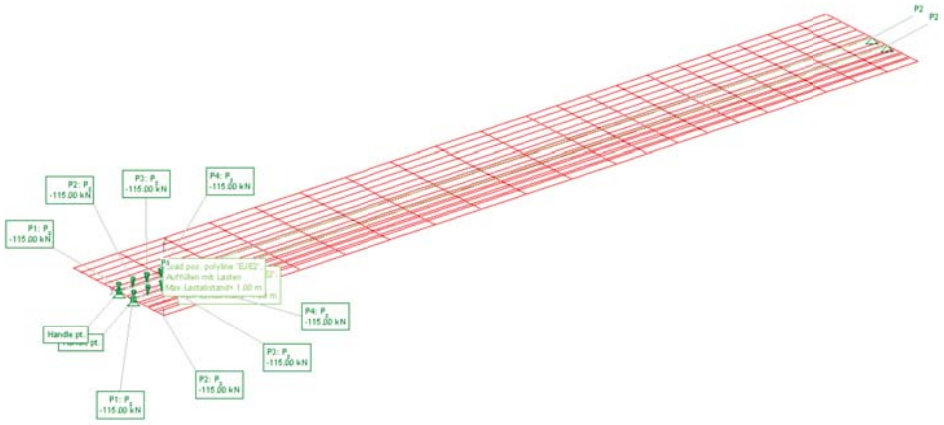
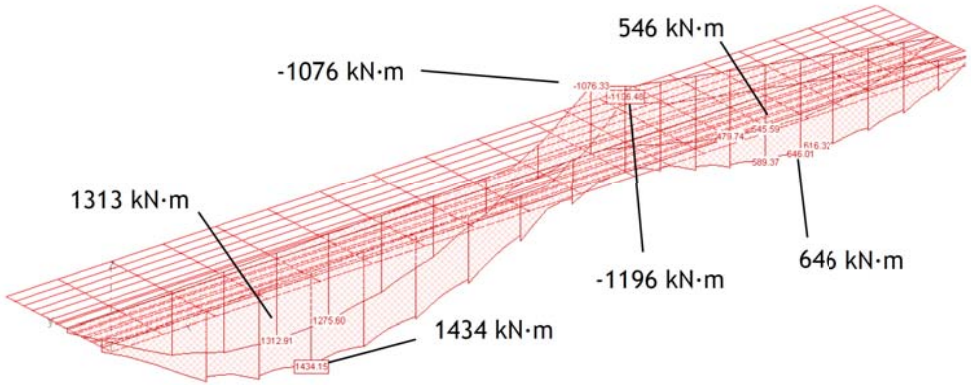


Transporte especial interior

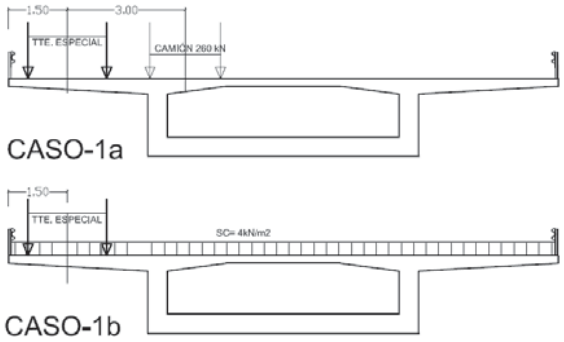


IAP-1

The criterion of discrimination is based on a comparative calculation between the forces produced by the permit vehicle (with or without current traffic) and forces derived from the Standard used in the design of the bridge.

Critical sections and relevant internal forces are selected for comparison purposes. Geometric compliances are also checked.

The tool automatically generates frame calculation models representing bridge decks by reading the information contained in the ABERTIS database of structures and launches the calculation program, in this case, CSI Bridge.



The result is sent to the user who made the request as a report in HTML that can be read in any web browser. The automated management system is also reported via an XML file that is incorporated into the system, so that a history of heavy transports that have crossed each structure accumulates.

The system has been developed for ABERTIS Spain with Spanish regulations IAP-98 and Chile ABERTIS with different standards related to AASHTO.

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