

**Dynamic
Innovative
Genuine**

Innovative and Technology-Focused Traffic Solutions...

CHAOS™, the first and patented Dynamic Junction Control System in Turkey

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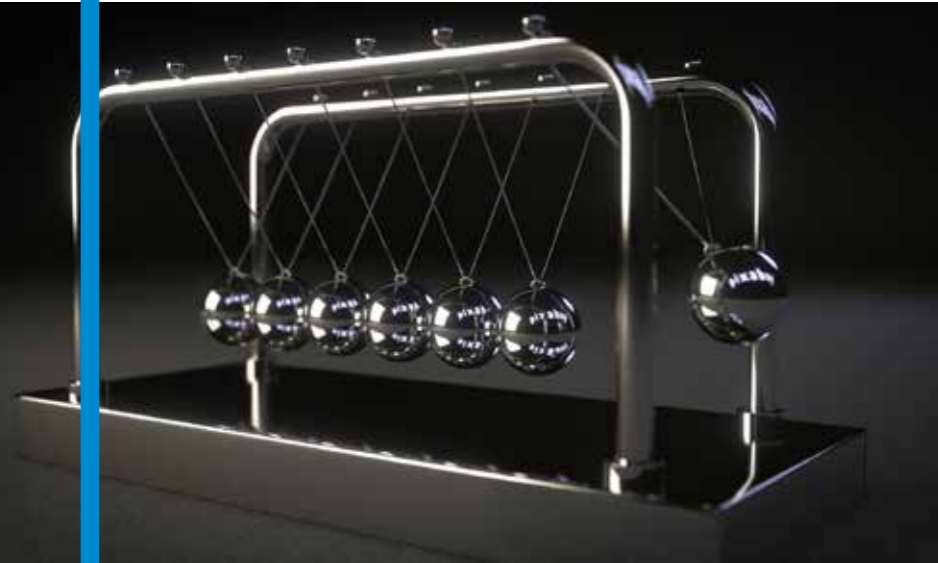
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ABOUT US

ISSD™ (Integrated Systems & Systems Design) is working on digital signal processing, software development and electronic design since 2009. ISSD™ provides solutions for Intelligent Transportation Systems (ITS) such as active traffic management, dynamic junction management, automated number plate recognition.

Dynamic Junction Control System CHAOS™ is working effectively in more than 700 junctions in Turkey, India, Georgia and Kazakhstan. Alternative traffic data collection systems (Bluetooth, FCD), traffic simulation software and traffic engineering consultancy are other services of ISSD™.

ISSD™ continuously works on R&D projects to seek solutions for transportation problems with the young and talented team.



Smart Traffic Solutions



Electronic Enforcement Systems



Integrated Tunnel Safety Solutions

SMART TRAFFIC SOLUTIONS

Dynamic Junction Control System, CHAOS™

Vehicle Counting System, VIERO™

Bluetooth Based Traffic Analysis System, BLUESIS™

Dynamic Junction Control Unit, CENTRIS



CHAOS™

Dynamic Junction Control System

Reduces delays and emissions at the signalized junctions by changing green times dynamically regarding the number of vehicles on each approach. CHAOS™ systems can communicate with each other via wireless connection for signal coordination and network optimization.

VIERO™ Vehicle Counting System

Is capable of counting vehicles passing through a road section under all weather conditions. VIERO™ can provide vehicle occupancy, vehicle speed, vehicle count and classification data in real time. The collected data can be transferred to a remote control center via wireless/wired connection.



BLUESIS™

Bluetooth Based Traffic Analysis System

Can calculate average travel time and speed between two locations in real time. BLUESIS™ can create not only travel times, but also vehicle trajectories and Origin-Destination matrices. It is possible to generate traffic density maps and announce real-time traffic data to drivers via Variable Message Signs, radios or mobile platforms.

CENTRIS Dynamic Junction Control Unit

Is a multi-functional control unit, which is used for junction management, signal optimization and the remote control of any traffic sensor/device including the detection of failure occurrence. Its high-speed processor allows to analyze collected data from various sensors in real time, and run the customized algorithms inside.





ELECTRONIC ENFORCEMENT SYSTEMS

Automated Number Plate Recognition Systems

Red Light Enforcement Systems

Speed Corridor Enforcement Systems

Parking Enforcement Systems



Automated Number Plate Recognition Systems

POINTR™ 3000 is an integrated ANPR system which recognizes number plates, brands and colors of the vehicles within the range. It can keep the collected data in the internal memory or transmit to a remote server via internet.



Parking Enforcement Systems

POINTR™ P2000 has the ability of detecting number plates of the vehicles automatically, which violate parking rules.



Red Light Enforcement Systems

POINTR™ K3000 detects the vehicles that violates red lights. The system helps improving traffic safety by minimizing the traffic accidents due to red light violation.



Speed Corridor Enforcement Systems

Speed Corridor Enforcement System detects the vehicles that violates speed limit in a corridor. The system helps improving traffic safety by minimizing the traffic accidents due to speed violation.



SPECTO™






Tunnel Incident Detection System

SPECTO™ is a vision based automatic incident detection system that reduces the operator reaction time by informing the operator against abnormal cases likely to occur in the tunnels. SPECTO™ can be integrated into any analog/digital camera systems available in the tunnels. System is also able to control different brand of cameras within a single interface. Operators can monitor the video cameras and able to observe detected events 24/7 via this interface.

INTEGRATED TUNNEL SAFETY SOLUTIONS

Tunnel Incident Detection System,
SPECTO™

SPECTO™ Analysis

	Detection of slow moving/stopped vehicles		Vehicle counting
	Detection of wrong-way driving		Calculation of real time traffic density
	Pedestrian detection		Smoke detection
	Calculation of vehicle density		Suspicious object detection

TRAFFIC SIMULATION SOFTWARE

PTV | VISSIM TRAFFIC SIMULATION

PTV | VISTRO TRAFFIC IMPACT

PTV | VISUM TRANSPORT STRATEGY

PTV | VISWALK PEDESTRIAN TRAFFIC SIMULATION

PTV | VISSIM TRAFFIC SIMULATION



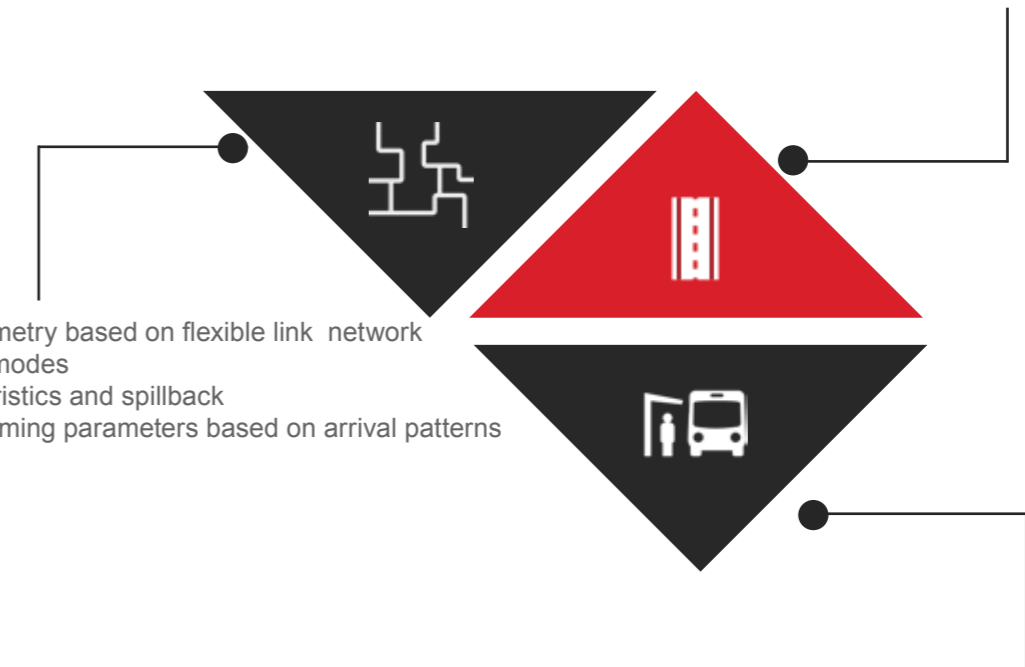
PTV Vissim is the ideal tool for state-of-the-art transportation planning and operations analysis. The software is designed to assist you in realistically simulating and balancing roadway capacity as well as traffic and transport demand.

Motorway Simulation

Model demand using static routing or dynamic traffic assignment
Simulate active traffic management and intelligent transport systems
Test and analyse work zone strategies

Arterial Simulation

Model any intersection geometry based on flexible link network
Simulate interactions of all modes
Analyse queueing characteristics and spillback
Verify and fine tune signal timing parameters based on arrival patterns



Public Transport Simulation

Model all details for bus, bus rapid transit, tramway, light rail transit and commuter rail operations
Analyse public transport specific operational improvements
Test and optimise industry standard public transport signal priority plans



PTV Vistro is the ideal tool for all your traffic analysis needs. Its intuitive user interface places all functions at your fingertips so that you can keep traffic flowing at the touch of a button.

Conducting Signal Timing and System Evaluations

Intersection, corridor, and network optimization
Seamless transition to PTV Vissim for microsimulation

Performing Corridor Studies

Re-design of facilities
Identifying proper traffic control devices
Evaluating future mitigation needs

Developing Transportation Master Plans

Efficient data entry and storage
Integration with P;TV VISUM for incorporation of long-range forecasting data

Conducting Traffic Impact Analyses (TIA)

Trip generation, distribution, and assignment of development traffic
Multiple scenario management
Mitigation testing and evaluation
Comprehensive, report-ready tables and figures
Preview future development traffic with the integrated ptv vissim viewer



PTV Visum is a comprehensive, flexible software system for strategic traffic and transport planning. Around the globe, the system is used for metropolitan, regional and state-wide infrastructure planning.

Traffic Master Plan

Import road and rail networks from various sources (OSM, shape, Google Transit etc.)
Calculate the appropriate multimodal demand model
Choose the suitable assignment method for your model and task

Construction And Development Of Roads

Optimise traffic flows by optimal improvement of the road network
Model different development scenarios
Perform environmental impact analyses (e.g. noise, pollutants)

Public Transport Planning

Optimise line networks
Calculate cost-benefit analyses
Process operational planning (e.g. line blocking)

Economic Efficiency Analysis

Economic assessment of investments in road construction according to uniform standards
Calculate public transport operational costs and revenues from fare systems
Support decision-making regarding the measures to be taken"

Analysis Of Traffic Engineering Applications

Build realistic node impedance models
Automatically optimise signal programs
Create simulation network for further microscopic analyses



Walking always was and remains the most prevalent mode of transport. But unlike vehicles, pedestrians do not follow strict rules. They spontaneously stop, change directions or make sudden turns. We have accepted the challenge and have developed a solution that takes into account the psychology of human walking behaviour.

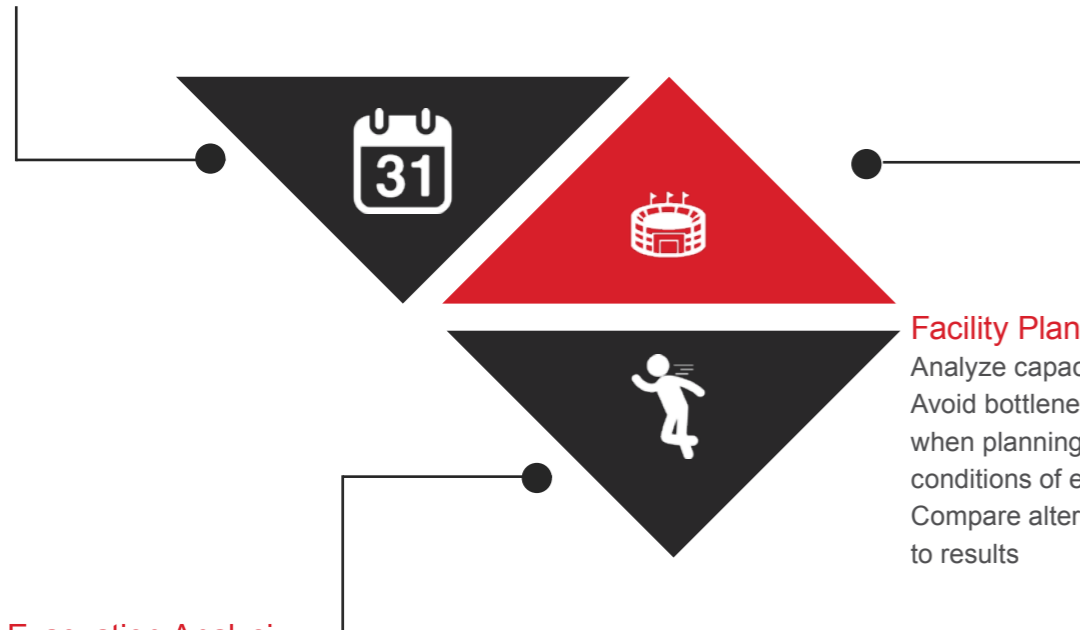
Event Planning

Visualise the flow of people based on simulation results

Realistic routing shows you where facilities like shops, restrooms and escape routes can be placed in an optimal way

Evaluate capacities and security procedures

Display the simulation results in a comprehensive 2D or 3D environment



Facility Planning

Analyze capacity and use space efficiently

Avoid bottlenecks and remove possible spatial barriers when planning new buildings or assessing the current conditions of existing office space

Compare alternative planning variants by the relation of costs to results

Evacuation Analysis

Pedestrian safety is of paramount concern, in particular in public places

Evaluate numerous structural and organisational measures aimed to reduce and control unmanageable behaviour of people in emergency situations

Analyse potential danger and plan pedestrian flows in buildings, stadiums and other facilities

Simulate escape routes and evacuation scenarios in highrise buildings and tunnels

OUR EXPERTISE

Traffic Engineering Trainings

Traffic Simulation Software Trainings

Traffic Volume Studies

Traffic Engineering Consultancy



Traffic Engineering Trainings

Scope

This training aims to expose basic concepts of traffic technique and theory in addition to the basic relations behind the methods to be used for transportation planning and traffic management studies. Theoretical matters are reinforced with practical applications during the trainings.

Content

- Signal Controller interfaces
- Signal optimization
- Signal coordination
- Prime and derived variables of traffic flow
- Basic traffic flow principles
- Capacity analysis
- Determination of level of service for signalized junctions

Participants

Traffic engineers, urban planners, traffic technicians, academic staff, students and employees in transportation departments of the organizations may attend to these trainings which are proposed at elementary and advanced levels.

Traffic Volume Studies

Traffic data collection is the first step of all the works on transportation planning and traffic management. ISSD™ uses technology-based methods for data collection such as image-based vehicle counting cameras, number plate recognition systems, drones, fisheye cameras. We are able to collect the following traffic data:

- Real time vehicle counting in passenger car unit (PCU)
- Classification of vehicles on real time basis
- Determination of traffic volumes for each approach of a junction
- Determination of OD matrix in a junction
- Determination of density, occupation and volumes at road segments
- Collection of the entrance/exit data in places like car parks, gas stations, terminals and so on

Traffic Simulation Software Trainings

Scope

This training aims to model a traffic network, generation of various scenarios by entering the real traffic data into the simulation environment and the analyses of the results.

Content

- Fundamentals of the traffic simulation
- Building Vissim Network
- Modelling Data and Inputs
- Route Choice / Speeds
- Right of way for give-way junctions
- Signal Control
- Public Transportation
- Evaluation
- Presentation
- VisVAP and Viswalk modules
- COM interface

Participants

Başlangıç ve ileri seviyeli olarak iki aşamada yapılan eğitime, trafik mühendisleri, şehir plancıları, trafik teknikerleri, üniversite akademik personeli, öğrenciler ve kurumların ulaşım birimlerinde çalışanlar katılmaktadır.

Traffic Engineering Consultancy

Geometric Design Studies

Geometric design studies of the signalized/unsignalized junctions are conducted based on highway standards (Highway Capacity Manual), which are accepted worldwide. Before implementing signal optimization, signal coordination or a smart traffic system, study area should be examined geometrically and geometric changes should be implemented if needed.

Signal Optimization

Signal optimization means calculating the best green times for reducing the average delays in a signalized junction, based on vehicle counts. Traffic counts are collected during peak and off-peak periods.

Traffic Feasibility Studies

Traffic feasibility studies include traffic data collection, analysis of the study area in terms of traffic engineering and proposals to improve the existing situation regarding the traffic simulation results. Traffic impact analysis, pedestrian safety studies, traffic circulation plans are some of the examples for traffic feasibility studies.

Signal Coordination

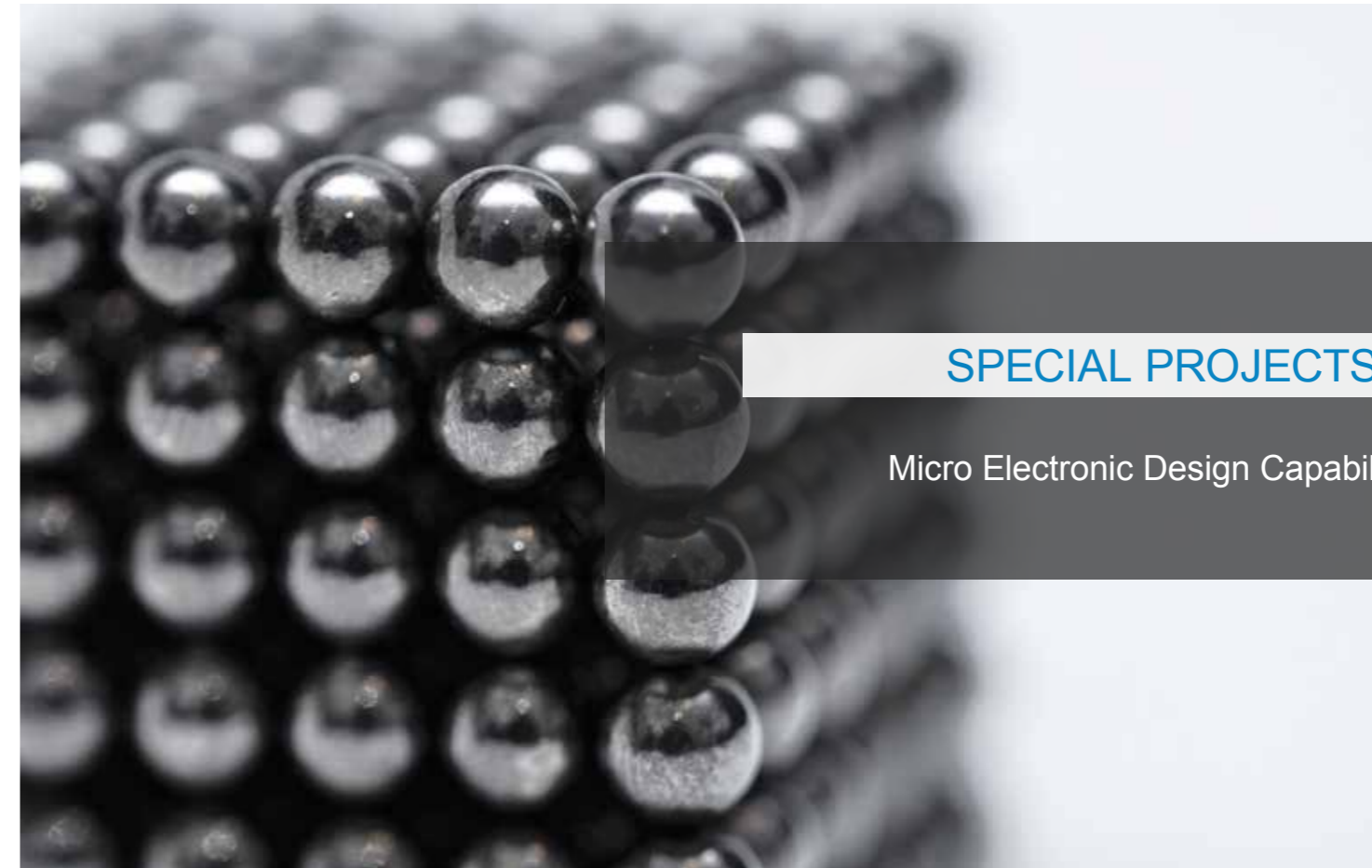
The main purpose of signal coordination is to reduce travel times along a corridor by coordinated junction management. This application is generally known as “green wave” and used to reduce corridor travel time, delays and traffic congestion at the junctions on a corridor.

Road Safety

Road safety studies include analysis of the traffic accident statistics and black spots, providing solutions to minimize accidents and improve safety. These studies are conducted based on highway safety standards (Highway Safety Manual), which are accepted worldwide.

Signal Controllers

Signal controllers are used to control traffic lights at the junctions. Controllers are programmed with manufacturer-specific interfaces, Preparation of the signal programs and selection of the modes (actuated, semi actuated, fixed time and emergency traffic actuated) needs expertise offered by ISSD™.



SPECIAL PROJECTS

Micro Electronic Design Capabilities



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