MIZAR AUTOMAZIONE S.P.A.

LEADING THE WAY
INTELLIGENT TRANSPORT SYSTEMS

A Company of the SWARCO Group
FIRST CHOICE FOR PERFORMANCE AND EFFECTIVENESS
MIZAR’s systems are renowned for their high performance in the congested and unpredictable traffic conditions typical of today’s roads. They exploit the latest technologies to provide leading-edge mobility solutions.

MAJOR STRENGTHS
- excellent safety and “green” credentials
- solutions with high operational efficiency
- easy to use, easy to extend
- an open architecture for simple integration with other systems
- adaptability to evolving technologies

A UNIQUE PARTNERSHIP
By choosing MIZAR, you enter into a special partnership whose aim is to provide the very best solution for your particular needs. As part of the SWARCO Group, we can meet your complete requirements, from software and electronics to hardware, including traffic lights, road markings and traffic signs.

ALWAYS AT THE LEADING EDGE
Three decades ago, as a small research group, MIZAR was a pioneer in the ITS field. Its then-revolutionary approach to adaptive traffic control has since evolved into a mature and highly reputed product; just one of a wide range of proprietary ITS applications. MIZAR is now a leading international company with consolidated experience and a wealth of specialised knowledge. The company remains deeply involved in international research and leads the way in innovation.
ALL-ROUND BENEFITS

MIZAR’s systems offer proven advantages in terms of safety and the environment as well as traffic fluidity and time-saving.

Maximum synergies are achieved with the full functional integration of traffic control, public transport management and traveller information applications. With an optimised combination of these systems, a city can expect to gain:

> 10 % reduction in energy consumption and CO₂ emissions
> 20 % savings in travel time for private cars and also public transport
> 50 % reduction in queuing time

These results have been achieved in MIZAR’s successful installations in numerous cities around the world including: Barcelona, Brussels, Bologna, Bucharest, Copenhagen, Gothenburg, Heraklion, Kiev, Milan, Naples, Oslo, Rome, Sharjah, Trondheim, Turin and Verona.

WHAT’S IN A NAME?
MIZAR is named after one of the brightest stars of the constellation Ursa Major, the Great Bear. The seven most visible stars of Ursa Major form the group known in Italian as the ‘Gran Carro’ or great cart: an intimation of the company’s involvement in the world of transport!

EXCELLENCE IN FOUR BUSINESS AREAS

Traffic Control  Public Transport Management  Informobility  Integrated Solutions
TRAFFIC CONTROL
OPTIMISING TRAFFIC FLOWS ACROSS THE ROAD NETWORK

- traffic light control
- priority for public transport and emergency vehicles
- traffic routing and guidance
- ramp metering

The UTOPIA Urban Traffic Control system offers a wide range of strategies designed to suit any road network. In the fully adaptive mode, it constantly monitors and forecasts the traffic status and optimises the control strategy according to flow efficiency and/or environmental criteria. This gives high performance even with unpredictable traffic conditions.

The system can assign weighted, selective or absolute priority to specific vehicles (e.g. buses/trams running behind schedule) without penalising other traffic.

UTOPIA was developed during the 1980s. Constant innovation and enhancements have made it one of the most advanced Urban Traffic Control systems in the world. It is successfully operating in dozens of metropolitan areas today.

UTOPIA features and benefits:
- real-time optimisation of traffic signals
- absolute or selective priority for public transport
- fully adaptive control, plan selection, traffic responsive and traffic actuated strategies
- unmatched performance proven in independent trials:
  - time savings for private cars > 15%
  - reduction in queuing time > 50%
  - increase of commercial speed for public transport > 20%
- hierarchical and decentralised architecture
- modular, scalable and fully integrated with OMNI
- can be interfaced to a large variety of traffic light controllers

The “intelligent” intersection controllers cooperate to calculate and implement in real time the optimal control strategy for the entire network.
PUBLIC TRANSPORT MANAGEMENT
IMPROVING THE QUALITY OF SERVICE

- vehicle location and monitoring
- service regularisation and management
- service reporting and certification
- real-time passenger information

The system makes it easy to have a full view of the fleet status at any time and improve the regularity of bus/tram services.

An important feature is the high quality of the passenger information services: from pre-trip planning to on-trip support, offered through info panels, on-board messages, and the Internet.

FLASHNET features and benefits:
- accurate vehicle location
- well tested forecasting models
- service regularisation and decision support for the operator
- full set of tools for reporting and statistical analysis
- reliable information services for passengers
- advanced graphical and web-based user interface
- big savings (same service level with fewer vehicles)
- modular, scalable and fully integrated with OMNIA

FLASHNET is currently operating successfully in more than fifty cities across Europe.

The system is at the heart of a public transport operations centre: service monitoring, management and information are dealt with in an integrated way.

FLEETRUNNER
MANAGING YOUR FLEET MORE EFFECTIVELY

- optimised management
- coordinating the mobile workforce
- full view of fleet status at all times
- substantial savings due to greater efficiency

This automated management platform is suitable for fleets of any size. Features are the user-friendly interface design and the information services for drivers. Over 5% savings in operational costs have been obtained by users of the platform.
INFOMOBILITY
RELIABLE TRAFFIC INFORMATION WHERE AND WHEN YOU NEED IT

- wide area traffic and mobility monitoring
- real time traffic modelling, forecasting and strategic management
- multi-channel traffic information services

The MISTIC platform supports traffic control centres by monitoring mobility on the road network. It collects and validates traffic and transport data from a wide variety of sources in order to:

- provide a complete time representation of current traffic conditions over the network
- reliably forecast the evolution of traffic patterns
- provide tools for wide area traffic management strategies

This data provides the basis for high quality mobility services with information on real-time traffic conditions, congestion, accidents and environmental emergencies, as well as parking space availability, points of interest and route planning services.

MISTIC features & benefits:

- integrated and modular suite of traffic models and computation engines for:
  - multi source traffic and mobility data fusion
  - traffic and mobility diagnostics and monitoring
  - statistical analysis and traffic flow forecasting
  - on-line O/D matrix estimation and traffic assignment
  - travel time estimation and forecasts
  - wide area strategic traffic control
- multi-channel diffusion of traffic information
- based on the European DATEX-Net standard
- easy integration within existing systems
- open to external information service providers

The MISTIC engines fuse data from many sources, build up an accurate picture and forecasts of traffic behaviour, and inform users through multiple channels.
HIGH LEVEL PLATFORM
SUPPORTING THE INTEGRATED ROAD
TRANSPORT ENVIRONMENT

- based on open, modular and scalable integration platforms
- built on MIZAR’s ITS applications, able to interface with other systems
- supporting cooperative monitoring and detection as well as cooperative control and management functions
- adaptable to evolving technology, standards and needs

OMNIA features and benefits:
- open platform with modular architecture for multiple ITS applications
- shared maps and databases
- a common GUI for the supervision and management of different ITS applications
- easy-to-use web browser based graphical interface
- adaptable to the specific needs of any city: ITS applications can simply be “plugged in”

The OMNIA platform builds on MIZAR’s experience in transport systems. It offers a high level framework providing user-friendly access to all the ITS applications deployed in a city or region.

All of the ITS applications offered by MIZAR can be integrated in the OMNIA platform.
SWARCO | FIRST IN TRAFFIC SOLUTIONS.

SWARCO is a growing international group providing the complete range of road marking, signaling and traffic management products, services and solutions. SWARCO has been committed to road safety with innovative solutions for four decades. The corporation supports the growing mobility needs of society with clearly identifiable state-of-the-art traffic guidance and control equipment. Reflective road marking systems and high-tech solutions for traffic telematics are the group’s core business.

The SWARCO TRAFFIC MANAGEMENT companies offer quality turnkey systems and solutions in urban and inter-urban traffic control, parking, public transport and infomobility. The SWARCO MATERIALS DIVISION companies are seasoned experts in creating safer driving conditions with highly visible retroreflective road marking systems and related services.

SWARCO is the world’s largest producer of traffic lights and the worldwide no. 2 in reflective glass beads. The excellence of a market leader, the strength of innovation, long-term partnerships and the resolute commitment to quality and service make SWARCO your first choice when it comes to making roads safer and traffic more fluid with innovative and environmentally sound means.

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