Kuwwat Merkezi

Products and services

About Kuwwat Merkezi

- Established in 2010

- Full-Time Highly Qualified Employees (Engineering & Management staff)

- Customer oriented Company strateg

Our Advantage

We carefully study requirements of our customers and prepare optimal solutions, taking into consideration all important details, such as specification of customers activity, quality requirements, deadlines, etc.. The project is designed and implemented by our high qualified technical staff using state-of-the-art technologies. It consists from the following steps:

- Analyze of Customer Needs
- Negotiating Specifications and Requirements
- System Design
- Delivery of Hardware and Software
- Installation and Commissioning
- System Documentation
- Customer Training
- Warranty Service
- After-Sale Service and Support

Content

- **Communication**
- IT technologies
- Software Development
- Passport system
- Security
- Defense
- Gas and Oil telemetry (SCADA)
- Railway automation
- Traffic control

PBX system

A **business telephone system** refers to any of a range of a multiline telephone systems typically used in business environments, encompassing systems ranging from small key systems to large scale private branch exchanges.

There are two types of PBX – Traditional/Hybrid PBX

Satellite solution VSAT

Satellite decisions VSAT

Kuwwat Merkezi gives reliable and inexpensive land stations of satellite communication, corresponding to requirements of the client concerning use of satellite technology which provides broadband communication in real time in remote and difficult conditions where application of a land infrastructure is impossible or it is unreliable.

Our company specializes on granting of services of global communications on a land and the sea for the oil and gas industry.

Kuwwat Merkezi gives ready complex decisions for clients precisely in time and in a proper place.

Kuwwat Merkezi offers stationary, mobile, and also the stabilized sea systems VSAT, which choice depends on requirements of the client.

Call center

A **call center** is a centralized office used for the purpose of receiving and transmitting a large number of calls.

A **call center** consists of work stations that include a computer for each operator, a telephone set/headset connected to a telecom switch, and one or more supervisor stations. It can be independently operated or networked with additional centers, often linked to a corporate computer network, including mainframes, microcomputers and LANs. Increasingly, the voice and data pathways into the centre are linked through a set of new technologies called computer telephony integration (CTI).

Tetra technologies

TETRA is an abbreviation of **Te**rrestrial **T**runked **R**adio and is a global standard for radio communication in the same way that GSM is the mobile telephony standard.

TETRA was developed to meet the needs of the most demanding professional radio users who need fast one to-one and one-to-many radio communication using voice and data in their daily work. Users are typically public safety and security organizations like police, fire and rescue forces, ambulance services, frontier guards and other professional cellular users like transportation companies, courier services, energy utilities, airports and so on. These technologies can be divided into three categories: Digital, Trunking and Time Division Multiple Access (TDMA).

Tetra provides a number of following core technologies:
- Secure speech/data transmission
- Automatic vehicle location
- Railway applications
- Road transport information
- File transfer & access to databases
- Fax
- Fixed image
- Slow video
- Fleet management

Microwave transmission system

Microwave Transmission Systems (MTS) Microwave transmission provides the sending and receiving of various signals through a microwave link. It constructs and maintains wireless communications transmitting and receiving facilities. In addition to building and erecting microwave towers and installing and testing cellular equipment, the company's services include planning related to feasibility studies and FCC radio frequency licensing. It also provides site and project management services:

- Preliminary path design, surveys, engineering, coordination, and link budget
- Radio system design and engineering; installation, testing, & turn up
- Site NEPA/SHPO/FCC/FAA compliance filings & certifications
- Antenna system installation, testing and certification
- Power systems engineering and installation, including all DC plant batteries, chargers, generators, local utility interface and service upgrades
- Ancillary transmission systems engineering and installation including multiplexing, test access, alarming, cell site and MSC interface.
- Transmission system support infrastructure engineering, construction, and installation including alarm systems, HVAC, room and shelter construction and renovations.

Advantages: No cables needed; Multiple channels available; Wide bandwidth.

Fiber optic transmission system

Fiber-optic communication systems generally include an optical transmitter to convert an electrical signal into an optical signal to send into the optical fiber, a cable containing bundles of multiple optical fibers that is routed through underground conduits and buildings, multiple kinds of amplifiers, and an optical receiver to recover the signal as an electrical signal. The information transmitted is typically digital information generated by computers, telephone systems, and cable television companies.

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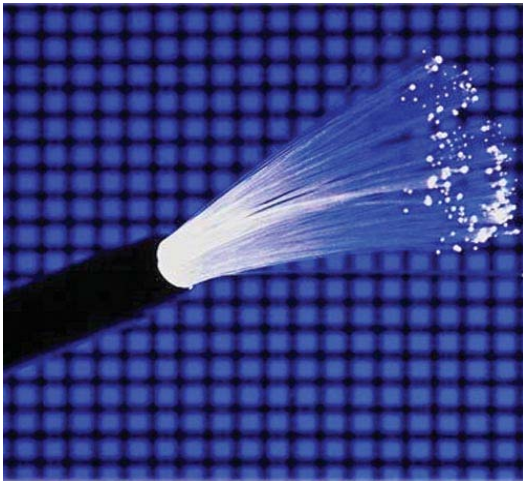
LAN/WAN–wire line and wireless

LAN (Local Area Network) - supplies networking capability to a group of computers in close proximity to each other such as in an office building. LAN is useful for sharing resources.

WAN (Wide Area Network) – is a computer network that covers a broad area (i.e., any network whose communications links cross metropolitan, regional, or national boundaries)

IPTV & VoD
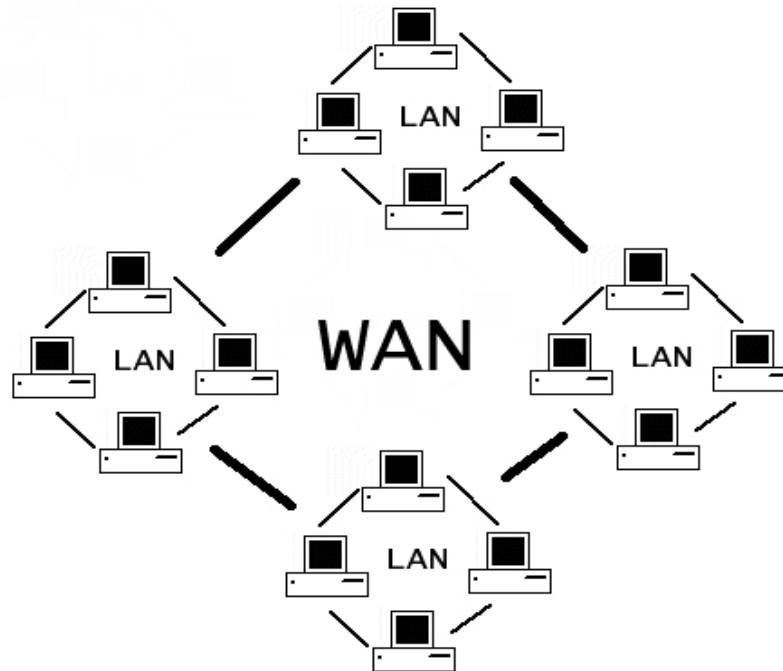
Internet Protocol TeleVision (IPTV) – is a technology that delivers video or TV broadcasts over the Internet. Instead of receiving television or video over the broadcast waves, cable lines or through a satellite TV service, your TV is hooked directly into a broadband Internet router and receives digital signal directly over the Internet.

Video on Demand (VoD) - is an interactive feature that allows you to request programs such as movies, TV shows, etc at your convenience.

Voice & Data security

Voice & Data Security products guarantee the end-to-end confidentiality and authenticity of sensitive information. This security is applied for the entire lifespan of each message, no matter whether it is transmitted, stored on the PC, or archived to an external medium.

Voice & Data security is accomplished with help of:

- Virtual Private Network (VPN)
- Firewall
- Encryption

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Trustworthy **Voice and Message Encryption**:

- Trustworthy solution for completely confidential encrypted telephone calls – whether by GSM cellular network, 3G/UMTS, satellite, or land line;
- Based on the strongest encryption algorithms on the market;
- Are the only secure phones that come with full source code available for independent review – allowing their security to be fully verified by independent researchers;
- Provide hassle-free, integrated security – protecting not only the information you exchange by phone, but also the data on your mobile device.

Providers

- DAMM (www.damm.dk)
- Siemens (www.siemens.com)
- Tyco (www.tyco.com)
- ERC (www.erc.ua)
- Alcatel-Lucent (www.alcatel-lucent.com)
- Anevia (www.anevia.com)
- New Voice (www.newvoice.ch)
- OTTO (www.ottoexcellence.com)
- Sepura (www.sepura.com)
- ROHILL (www.rohill.com)
- Corning (www.corning.com)
- GSMK (www.gsmk.de)

SIEMENS

Alcatel·Lucent

CORNING

ROHILL

newVoice
...Security under control

OTTO
Expect Excellence.

sepura

ANEVIA

DAMM
– Stay in touch

tyco
Electronics

ERC

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Server equipment

A **server computer** is a computer, or series of computers, that link other computers or electronic devices together. They often provide essential services across a network, either to private users inside a large organization or to public users via the internet.

It consists of:

- a computer program running to serve the needs or requests of other programs, which may or may not be running on the same computer.
- a physical computer dedicated to running one or more such services, to serve the needs of programs running on other computers on the same network.
- a software/hardware system (i.e. a software service running on a dedicated computer) such as a database server, file server, mail server, or print server.

Computer networks

Facilitate communications

- Using a network, people can communicate efficiently and easily via email, instant messaging, chat rooms, telephone, video telephone calls, and video conferencing.

## Permit sharing of files, data, and other types of information

- In a network environment, authorized users may access data and information stored on other computers on the network. The capability of providing access to data and information on shared storage devices is an important feature of many networks.

Share network and computing resources

- In a networked environment, each computer on a network may access and use resources provided by devices on the network, such as printing a document on a shared network printer. Distributed computing uses computing resources across a network to accomplish tasks.

May interfere with other technologies

- Power line communication strongly disturbs certain forms of radio communication, e.g., amateur radio. It may also interfere with last mile access technologies such as ADSL and VDSL.

Distributed Processing
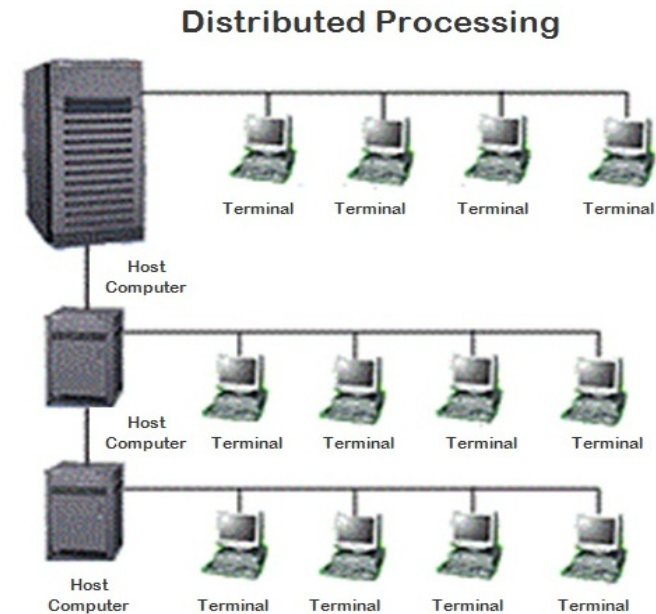
Data storage

Data storage, often called storage, refers to computer components and recording media that retain digital data.

Hierarchy of storage:

- **Primary storage** - is the only one directly accessible to the CPU (central processing unit). The CPU continuously reads instructions stored there and executes them as required. Any data actively operated on is also stored there in uniform manner.

- **Secondary storage** - (also known as external memory or auxiliary storage), differs from primary storage in that it is not directly accessible by the CPU. The computer usually uses its input/output channels to access secondary storage and transfers the desired data using intermediate area in primary storage. Secondary storage does not lose the data when the device is powered down—it is non-volatile.

- **Tertiary storage** or **tertiary memory** - provides a third level of storage. Typically it involves a robotic mechanism which will mount (insert) and dismount removable mass storage media into a storage device according to the system's demands; this data is often copied to secondary storage before use. It is primarily used for archiving rarely accessed information since it is much slower than secondary storage.

- **Off-line storage** - is a computer data storage on a medium or a device that is not under the control of a processing unit. The medium is recorded, usually in a secondary or tertiary storage device, and then physically removed or disconnected. It must be inserted or connected by a human operator before a computer can access it again. Unlike tertiary storage, it cannot be accessed without human interaction.

Multiprotocol Label Switching (MPLS) is a mechanism in high-performance telecommunications networks which directs and carries data from one network node to the next with the help of labels. MPLS makes it easy to create virtual links between distant nodes. It can encapsulate packets of various network protocols.

MPLS is a highly scalable, protocol agnostic, data-carrying mechanism. In an MPLS network, data packets are assigned labels. Packet-forwarding decisions are made solely on the contents of this label, without the need to examine the packet itself. This allows one to create end-to-end circuits across any type of transport medium, using any protocol. The primary benefit is to eliminate dependence on a particular data link layer technology, such as Asynchronous Transfer Mode (ATM), Frame Relay, Synchronous Optical Networking (SONET) or Ethernet, and eliminate the need for multiple layer-2 networks to satisfy different types of traffic. MPLS belongs to the family of packet-switched networks and gives network operators a great deal of flexibility to divert and route traffic around link failures, congestion, and bottlenecks.

IP
MPLS
Ethernet , Frame relay , ATM , PPP , etc
Physical Layer
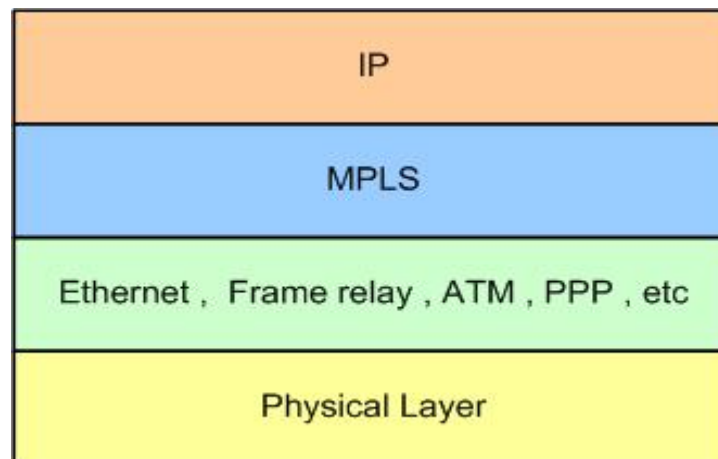
Switch

A **network switch** or **switching hub** is a computer networking device that connects network segments.

The term commonly refers to a multi-port network bridge that processes and routes data at the data link layer (layer 2) of the OSI model (Open Systems Interconnection model). Switches that additionally process data at the network layer (Layer 3) and above are often referred to as Layer 3 switches or multilayer switches.

Switches may operate at one or more layers of the OSI model, including data link, network, or transport (i.e., end-to-end). A device that operates simultaneously at more than one of these layers is known as a multilayer switch.

Fiber optics is a method of carrying information using optical fibers. An optical fiber is a thin strand of glass or plastic that serves as the transmission medium over which information is sent. The basic fiber-optic system is a link connecting two electronic circuits.

There are three basic parts to a fiber-optic system:

- *Transmitter: The transmitter unit converts an electrical* signal to an optical signal. The light source is typically a light-emitting diode, LED, or a laser diode. The light source performs the actual conversion from an electrical signal to an optical signal. The driving circuit for the light source changes the electrical signal into the driving current.
- *Fiber-optic cable: The fiber-optic cable is the transmission* medium for carrying the light. The cable includes the optical fibers in their protective jacket.
- *Receiver: The receiver accepts the light or photons* and converts them back into an electrical signal. In most cases, the resulting electrical signal is identical to the original signal fed into the transmitter. There are two basic sections of a receiver. First is the detector that converts the optical signal back into an electrical signal. The second section is the output circuit, which reshapes and rebuilds the original signal before passing it to the output.

Typical Fiber Optic Transmission System
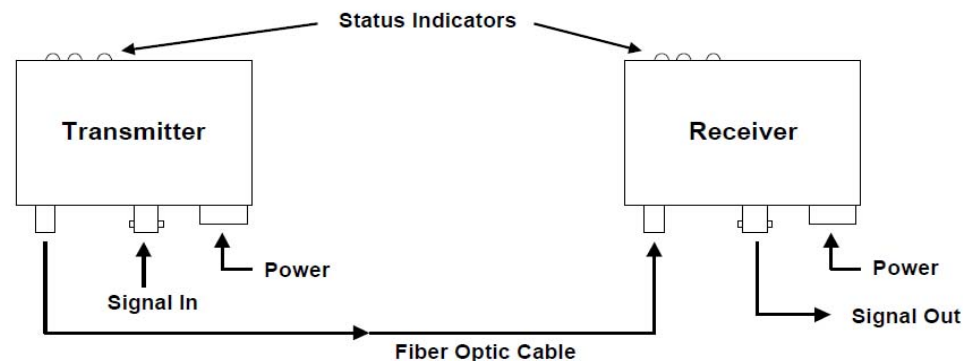
DWDM

Dense Wavelength Division Multiplexing (DWDM), an optical technology used to increase bandwidth over existing fiber optic backbones.

DWDM works by combining and transmitting multiple signals simultaneously at different wavelengths on the same fiber. In effect, one fiber is transformed into multiple virtual fibers. So, if you were to multiplex eight OC -48 signals into one fiber, you would increase the carrying capacity of that fiber from 2.5 Gb/s to 20 Gb/s. Currently, because of DWDM, single fibers have been able to transmit data at speeds up to 400Gb/s.

A key advantage to DWDM is that it's protocol- and bit-rate-independent. DWDM-based networks can transmit data in IP, ATM, SONET /SDH, and Ethernet, and handle bit rates between 100 Mb/s and 2.5 Gb/s. Therefore, DWDM-based networks can carry different types of traffic at different speeds over an optical channel.

Providers

- Cisco (www.cisco.com)
- HP (www.hp.com)
- Dell (www.dell.com)
- Juniper (www.juniper.net)
- ERC (www.erc.ua)
- Alcatel-Lucent (www.alcatel-lucent.com)
- Planet (www.planet.com.tw)
- Focabex (www.focabex.com)
- Abris (www.abrisdc.com)
- Draka (www.draka.com)
- Supermicro (www.supermicro.com)
- Korenix (www.korenix.com)
- KOPOS (kopos.ge)

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Hotel Management Software (HMS) is designed to accommodate the needs of various types of hospitality services. It has several modules (PBX, restaurant etc.), useful for hotel management. This system is very flexible and expandable – it can support large number of rooms and services. It uses SQL database server as backend, so you can use it in multi-user mode. Manager can Backup and Restore data into local directory. Design supports many skins and user can choose favorite. So HMS is the ideal tool for complete controlling and management of your internal processes.

PBX billing

PBX billing - performs call analysis, authentication, tariffication, billing, payments tracking, report generation

- multiple level (tree-like) customers database structure with up-to-down inheritable properties (subscriber payees, services, tariffs, required reports etc.)
- multiple level (tree-like) zones database structure, such as unknown, local (divided by incoming and outgoing), national, international etc., with up-to-down inheritable properties (tariff rates)
- multiple Carriers and Tariff rates
- on-line/off-line customer calls processing (authentication and tariffication)
- multiple currency support
- currency rates database
- automatic importing call records from Call Collector for Billing analysis
- call records data analysis with disclosure outgoing calls with unknown destination or appearing new customer phone numbers
- treatment of incoming, internal, transferred, multi portion and abandoned calls
- automatic billing with registering bills in database
- supports fully automatic scheduled billing and reporting for each customer
- optional "interactive tariffication" mode (for real-time client financial balance tracking)
- various detailed reports with cost and traffic analysis (on customer demand)
- built-in custom report generator
- unique report format with multiple format export ability (html, text, csv, tab delimited, jpeg)
- client payments tracking
- optional notification about critical value of customer balance (in on-line processing)
- reliable messaging system reduce erroneous user actions
- client-server
- multi-user
- multiple security level

Call center

Call centre technology include speech recognition software to allow computers to handle first level of customer support, text mining and natural language processing to allow better customer handling, agent training by automatic mining of best practices from past interactions, support automation and many other technologies to improve agent productivity and customer satisfaction. Automatic lead selection or lead steering is also intended to improve efficiencies, both for inbound and outbound campaigns, whereby inbound calls are intended to quickly land with the appropriate agent to handle the task, whilst minimizing wait times and long lists of irrelevant options for people calling in, as well as for outbound calls, where lead selection allows management to designate what type of leads go to which agent based on factors including skill, socioeconomic factors and past performance and percentage likelihood of closing a sale per lead.

- Tiger (www.tigercomms.com)
- Deutsche Center LTD.
- UTTC (uttc.com.ua)
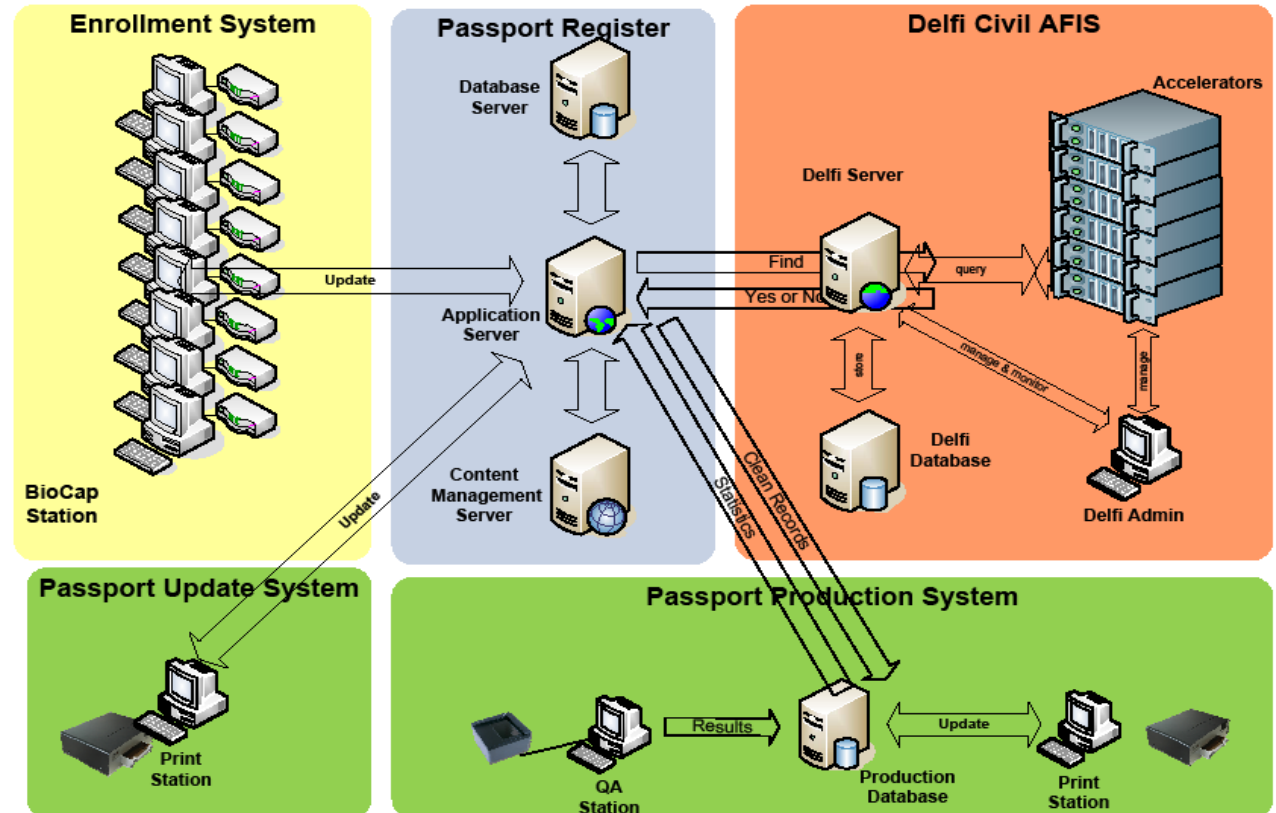- Veziri Ltd (www.veziri.com)

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Civil Registry System

System structure:

- Registration system
- Passport registration system
- Civil AFIS (Automated Fingerprint Identification System)
- Passport issuing system
- Passport update system

Providers

- Avalon biometrics (www.avalonbiometrics.com)
- Cetis Slovenia (www.cetis.si)

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CCTV

Closed-Circuit Television (CCTV) is the use of video cameras to transmit a signal to a specific place, on a limited set of monitors. In industrial plants, CCTV equipment may be used to observe parts of a process from a central control room, for example when the environment is not suitable for humans. CCTV systems may operate continuously or only as required to monitor a particular event. A more advanced form of CCTV, utilizing Digital Video Recorders (DVRs), provides recording for possibly many years, with a variety of quality and performance options and extra features (such as motion-detection and email alerts).

Types of CCTV systems:

- CCTV over IP
- Intelligent video

Fire alarm system

An automatic **fire alarm system** is designed to detect the unwanted presence of fire by monitoring environmental changes associated with combustion. In general, a fire alarm system is classified as either automatically actuated, manually actuated, or both. Automatic fire alarm systems are intended to notify the building occupants to evacuate in the event of a fire or other emergency, report the event to an off-premises location in order to summon emergency services, and to prepare the structure and associated systems to control the spread of fire and smoke.

Access control

An **access control system** keeps restricted areas protected from intruders and permits access only to authorized personnel. An access control system even records the entrance time of employees. It protects and secures the people, documents and equipment of a certain facility.

An **access control system** is very functional in buildings with multiple entry points. Entries and exits through these doors are controlled by the access control system using different types of security devices. The most common is the control panel which features numbered buttons or a touch sensitive screen that is connected to the lock and release system of the door. A specific pin code is entered by the employee and validated by the access control system.

Intrusion detection system

An **intrusion detection system** (IDS) is a device or software application that monitors network and/or system activities for malicious activities or policy violations and produces reports to a Management Station. Intrusion prevention is the process of performing intrusion detection and attempting to stop detected possible incidents. Intrusion detection and prevention systems (IDPS) are primarily focused on identifying possible incidents, logging information about them, attempting to stop them, and reporting them to security administrators.

X-rays are waves of electromagnetic energy which form part of the electromagnetic spectrum, along with other waveforms such as radio waves, microwaves, infrared waves, UV waves and gamma waves. The term "X-ray Signature" refers to the patterns an item produces on the X-ray machine monitor. An item's X-ray signature differs in several important respects from an ordinary photographic (optical) image. The main difference is that the X-ray image is formed as a function of the x-rays' absorption when passing through material, whereas a photographic image is formed by light reflecting from an object's surface.
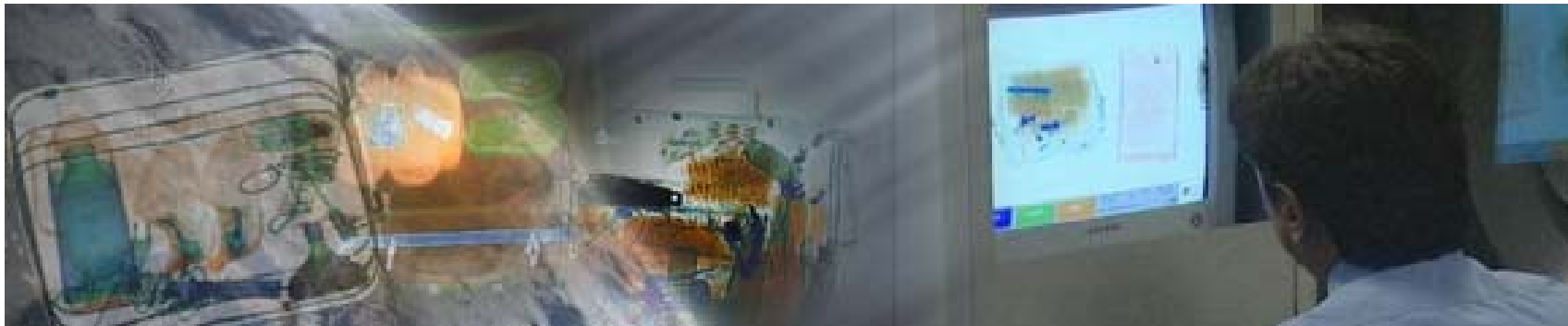
Voice Evacuation System

Voice Evacuation System, EVAC, combines a multi-channel fully digital bus structure with a robust, industry proven, powered speaker system for manifold public address applications.

The multi-channel system carries audio content to individual play-out locations, allowing highly-focused paging, voice evacuation and micro casting of individual audio programs.

Providers
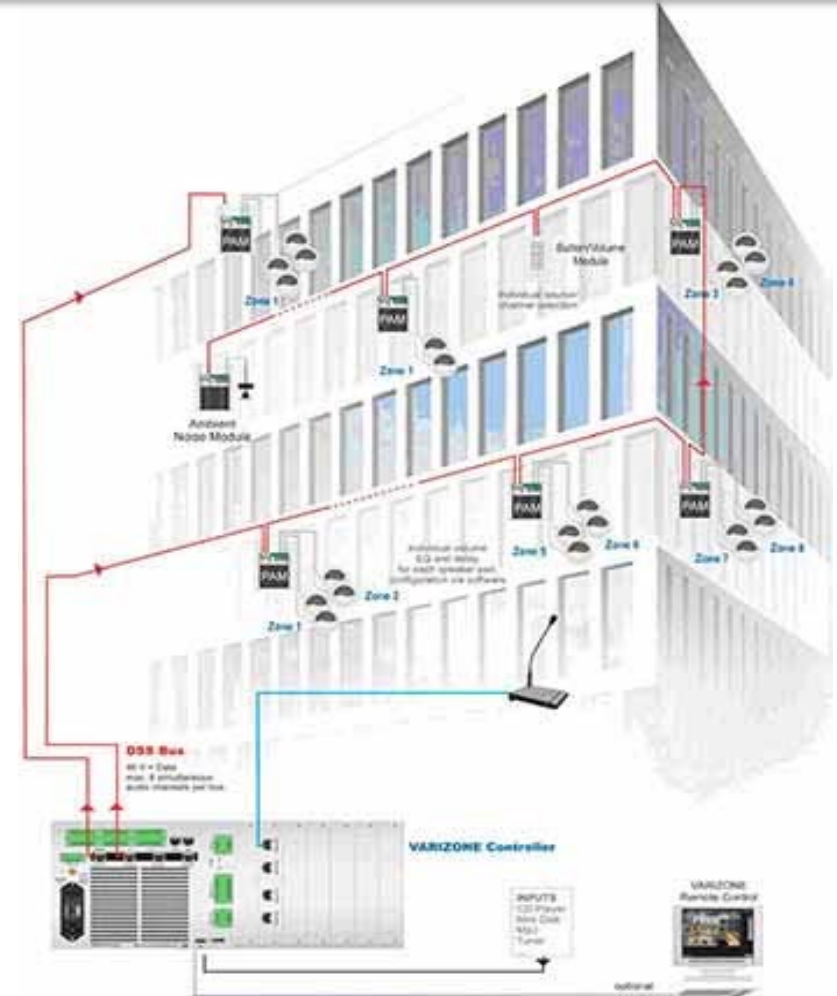
- General Electric (www.ge.com)
- AXIS (www.axis.com)
- CBC (DEUTSCHHL AND) GmbH (www.cbc-de.com)
- ACTI (www.acti.com)
- SAMSUNG (www.samsung.com)
- Vidicore (www.vidicore.com)
- Cieffe (www.cieffe.com)
- IOImage (www.imimage.com)
- Siemens (www.siemens.com)
- Arecont Vision (www.arecontvision.com)

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Informational Security

Information Security means protecting information and information systems from unauthorized access, use, disclosure, disruption, modification, perusal, inspection, recording or destruction.

Governments, military, corporations, financial institutions, hospitals, and private businesses amass a great deal of confidential information about their employees, customers, products, research, and financial status.

Key features:

- Secure messaging
- Virtual Private Networks
- Secure file exchange
- E-mail security
- Key factory
- Customized solutions

Special Equipment

Special equipment include products for covert surveillance and countermeasures gear:

- Portable Digital Video Recorders
- DVR Accessories
- High Resolution Wireless Covert Cameras
- Counter Surveillance
- Transmitters and Receivers
- Special Law Enforcement Products

Border Solution

Intelligent Detection and Surveillance robot provides high-end security through a combination of various technologies and image processing. It allows for unprecedented target recognition at all hours to provide the ultimate protection from intrusion. This technology consists of multiple integrated systems to make security more affordable than ever.

Mainly consists of :

- Surveillance
    - Intelligent camera
    - Ground surveillance radar
    - Acoustic device

- Suppression

- Target tracking

- Control system

- Operation software

- Powerful network capabilities

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Providers
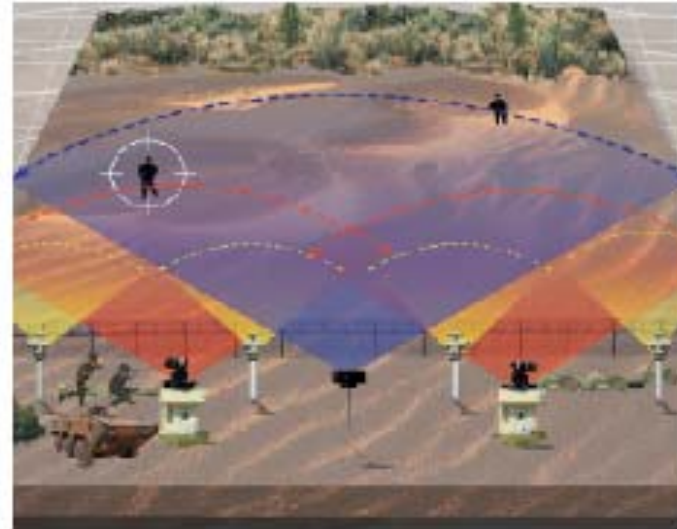
- Mils (mils.com)
- GSMK cryptophone (www.cryptophone.de)
- Certes Networks (www.certesnetworks.com)
- Optilan (www.optilan.com)
- Kongsberg (www.kongsberg.com)

mils ELECTRONIC

GSMK CRYPTOPHONE

CERTES NETWORKS

Optilan UK Limited

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Gas & Oil telemetry (SCADA)

SCADA solutions for Oil and Gas automation are flexible and comprehensive. They include integration of :

- Electronic Flow / Production Measurement
- RTU and RTU Packages
- SCADA Hosting
- Alarm Callout
- Plunger Lift / Production Optimization
- Remote Video Surveillance
- Remote Site Communications
- Remote Well Testing

Providers

- Iskra-MIS (www.iskra-mis.si)
- Rockwell Automation (Allen Bradley) (www.ab.com)
- VDT (www. vdt.cs.wisc.edu)
- Optilan (www.optilan.com)

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Advanced **railway traffic control** system is a supervision and control system, also known as Central Traffic Control (CTC).

The CTC in general contains the following pool of railway traffic on-line control functions:

- Communication and data exchange between interlocking equipment and CTC system,
- supervision and control support on workstations with sharing of common control area between operators (dispatchers) and protection against unauthorized intervention and data access,
- train route settings and interlocking equipment control with full automatic feedback control of commands execution,
- marking of sections and switch points, intended for specific situation
- registration of manipulations, faults and other events (event log, alarm lists . . .),
- train describer subsystem (automatic tracking of trains) with traingraph,
- operator's supervision of train routes and traffic in real-time (detailed display of stations on monitors)
- display of entire railway line on indication panel with LED technology or on a videowall (a control system and an array of video screens that allow the display of one or many information sources. Videowall display devices can be video monitors, projectors or panels),
- advanced test and simulation tools for operation simulation and system acceptance testing,
- configuration, diagnostics and maintenance tools

Providers

- Iskra sistemi (www.iskrasistemi.si)
- Alstom (www.alstom.com)

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Traffic Control Systems are focused on providing total solutions for Traffic, Parking & Video which use the latest most advanced technology available in order to provide efficient and reliable traffic management solutions for any application.

The system is divided on three parts:

1. Traffic division
2. Parking division
3. Video division

Providers

- Iskra sistemi (www.iskrasistemi.si)

Thank you for attention.

Tel/Fax: +99312 438508

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e-mail: info@kuwwat-merkezi.com