What's NEW

- **New PCI-Xpress capture boards deliver faster speed rates and require lesser server dimensions**
- **Multi zones motion detector enables simultaneous analysis of different multiple motion zones and provides specialized solutions for detection of movement direction, precise PTZ cameras positioning for additional zones recording, etc**
- **Installation option for Network IP cameras to support new video surveillance technologies or while building a distributed system**
- **New graphical interface R-CAD provides video surveillance integration with different control and management systems such as “smart house”, access control and building management systems**
- **Special Delta Statistics function is designed to analyze motion distribution inside the recorded video stream and helps to adjust more precisely motion detection settings**
- **Alternative Java based Video Client version for smart phones**
- **Video Client for mobile phones now supports Symbian 9th series devices**

System architecture

Video server is a computer system, equipped with video capture cards. Each card digitizes from one to four video channels. Video server supports up to four cards operating in black-and-white or color mode. MSH Video Server software installed on the server performs recording, control, playback and system administration functions. Access to the data, recorded by the server, as well as its administration, may be performed both locally and remotely. Remote access is possible by web browser, or using the video client component.

Video Client is a computer, PDA or mobile phone with MSH Video Client software installed. Video Client ensures access to video server - to review recorded data and perform management and monitoring functions.

Server features

Displaying

- **Any number between 1 and 16 functional cameras may be viewed simultaneously**
- **User-friendly "Drag-and-Drop" interface used for selecting cameras into screen layouts.**
- **16 user determined screen layouts to meet various observation needs**
- **Automatic camera layout switching at given intervals**
- **Keyboard “Hotkeys” for simplified video channel switching**
- **Special background mode (without display functions) developed for server operations**
- **Well identifiable icon for each camera status (idle, record, disabled, fault)**
- **Access to review of recorded video data for authorized users only, based on predefined access rights**
- **“On Top Monitor” - additional mode for convenient display of selected video channels**

Recording

- **16 black-and-white or color video channels per system**
- **384x288(QF), 768x288(HF), 768x576(FF) pixels resolutions**
- **High Speed Recording: from 4-5 to 25 fps per camera depending on server configuration**
- **Adjustable recording frame rate individually for each camera**
- **Audio channel with adjustable activation level capable to activate any video channel recording**
- **Proprietary and flexible algorithm for motion detection with possibility of setting up to ten independent zones for each camera**
- **Dynamic fps distribution between video channels depending on detected motion**
- **Proprietary delta compression algorithm with adjustable delta sensitivity level and compression ratio (up to lossless)**
- **Uninterrupted recording by cyclic overwriting of oldest video data with newest one**
- **Built-in scheduler functions for time based control of recording and notifications**

Playback

- **Simultaneous playback of up to 16 video channels synchronized with audio**
- **Simultaneous playback possible while keeping full-functional recording**
- **Original graphical subsystem allowing to view all or selected recorded events**
- **Original operating approach allowing to have more detailed view of recorded events through simple mouse operation**
- **All playback features present: real-time, fast, slow forward/backward playback, stop, pause as well as user adjustable speed for smooth playback control**
- **Newly programmed method to ensure search of detected motions at defined camera areas and at chosen periods of time**
- **Convenient bookmark feature for handy operations with video archive**
- **Easy-for-use picture improvement functions: zooming, sharpening, smoothening and deinterlacing**
- **Native CD Recording feature for convenient export of selected video fragments Separate function to store selected frame in a JPG file with tamper-proof watermarking and digital signature**

Management

- System access for authorized users only, based on predefined access rights
- Built-in specialized hardware watchdog for continuous operation
- Ability to resume last state operation in conjunction with power/watchdog restart including automatic check of disk and video archive
- Intuitive Graphical User Interface (GUI) ensuring setup and management functions by “click and feel” technology.
- Command Line Interface (CLI) for expert users and remote management functions
- Established event log enabling to register various system events such as start/stop recording, cameras faults, remote users connection, etc
- Intelligent automatic backup of video archive
- Possibility of immediate e-mail or SMS notification about malfunctions and system events
- Time based control of system functioning through easy-to-use Scheduler interface
- Build-in performance analyzing tool

R-CAD - Events Management

- Graphical tool to enable visual programming of custom controlling, management, configuration and integration tasks
- Constantly expanding list of internal devices to enable access to internal functions and interface parts of Video Server and Video Clients
- Open interface for external devices and third party applications integration
- Possibility to program custom solutions on schematics level using preinstalled devices
- Possibility to program additional custom devices with new graphical and interface elements using script-based programming language
- Visual graphical environment for checking and debugging created configurations
- Build-in virtual machine for executing client tasks on Video Server side and deliver back results on the Client side
- Build-in virtual machine supports Video Client applications for PC and smart phones
- R-CAD offers same full functional interface for the remote Client's PC as it is available for the Video Server

Video Client

- Support of low bandwidth connections through intelligent compression of video data
- Remote server access for authorized users only, based on predefined access rights
- Possibility to set up at client's site various video server parameters such as number of cameras, quality, fps
- Local recording function of transmitted remote video stream
- Graphical User interface (GUI) and Command Line Interface (CLI) for remote server management

Video Multi Client

- Simultaneous control and display of up to 32 cameras from different server sides
- Synchronous playback of video archives from multiple servers
- Pre-configuration of connections to remote servers
- User based access to stored configurations
- Client side motion detection zones define Video Server independent motion activity alarms for easy monitoring of multiple cameras
- Multi display support enabling simultaneous view of multiple copies of application

Remote features

Video Client for Smart phones and PDA devices

Fully functional remote surveillance using Symbian based smart phones and Windows mobile devices via GPRS, 3G, WLAN, wireless network

- **Intelligent video stream transmission method specially designed for low-bandwidth wireless mobile networks**
- **Easy switch between portrait and landscape view for best display of camera picture**
- **Ability to monitor status of server cameras**
- **Multiple profiles to connect different Video Servers easily**

Server Monitoring

Ensures proper functionality and helps to perform proactive maintenance of multiple servers in different locations

- **Monitoring of remote connection, server parameters and cameras status**
- **Display server operational parameters, including actual archive capacity, last and first date in archive**
- **Early warning and notifications about system malfuACnctions**
- **Several severity levels of notifications and logging**
- **Possibility of alerting errors and warnings via e-mail**

Input/Output Device

- **USB 1.1 and USB 2.0 compatible interface**
- **8 optocoupled inputs and 8 relay outputs**
- **Support for multiple devices simultaneously**
- **Flexible combination rules for inputs signals to produce variety outputs**
- **Convenient management via graphical R-CAD Video Server Alarm Scheduler interface**
- **Possibility to integrate additional hardware or software components**

Integration features

Allows integration MSH Video software with third party applications

Video Client ActiveX SDK

- **Allows features, available on Video Client, to integrate into any application and use natively from that application**
- **Access to additional Video Server control functions, including start/stop recording, activation recording of any camera, etc.**

System requirements

- **Intel Celeron, Pentium processor (speed depends on the number of video channels and expected remote connections)**
- **Motherboard based on Intel chipsets**
- **Display card with hardware video stretching function**
- **256 Mb - 512Mb system RAM**
- **Storage space (HDD) from 80Gb and up***
- **LAN/WAN/Modem for remote operations**
- **Operating Systems: Microsoft Windows XP/2000**

***Volume of the disk space depends on the information required storage period in the video archive, number recording of video channels and their parameters/settings:**

- **Speed of recording stream (frames per second)**
- **Resolution**
- **Color or black and white regimen**
- **Sensitivity of delta algorithm**
- **Quality of compression of the recorded stream**

For approximate calculation of the volume for the required disk space it may be taken into account that one black and white camera delivering 13 ftp, with resolution 768x288, in the office-based activity regimen (30 40% in 24 hrs) with necessary video archive for 24 hours occupies 1 Gb of the disk space.
The color mode camera with same configuration occupies about 1.4Gb

Free demo version download at http://www.quard.lv
Demo version supports all Bt878 chipset capture cards

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