SPECTIVA

We power Your eyes

cieffe

SPECTIVA DVMS

DIGITAL
VIDEO
MANAGEMENT
SYSTEM

SPECTIVA DVMS is the latest generation of Cieffe DVMS. Similarly to PROXIMA DVMS, its predecessor, SPECTIVA DVMS is a fully-featured 4, 8 or 16-channel digital audio/video recording and management system offering even more power and intelligence to your eyes.

SPECTIVA DVMS with a built in multiplexer is capable of processing 50/60 (PAL/NTSC) Images per Second from 4, 8 or 16 unsynchronised video inputs while also recording up to 4 audio channels.

SPECTIVA DVMS Real Time delivers the ultimate audio/video performance - dedicated 25/30 Images per Second (PAL/NTSC) per camera input for maximum digital video quality. Unparalleled performance levels of SPECTIVA DVMS Real Time (up to 400/480 IPS @ Full PAL/NTSC resolution) make it an excellent choice for casinos and other premium real-time Digital CCTV installations.

SPECTIVA DVMS dynamically adjusts image recording quality and rates in response to the environment it is operating in. Independent, multi-sector recordings for each camera, powerful, self-contained **neural networks based motion detector** and external alarm inputs make SPECTIVA DVMS a very comprehensive Digital CCTV solution. Built-in relay controller provides command of external devices, either manually or automatically, in response to pre-programmed conditions.

As with all CIEFFE products, SPECTIVA DVMS and SPECTIVA DVMS RT use Wavelet compression technology implemented in hardware to provide **400/480 Images per Second** of the ultimate in crisp, clear high-resolution full-frame images. Image resolution is a startling 720x576/720x480 (PAL/NTSC). SPECTIVA's new hardware implementation ensures visual quality unmatched by other systems (including PROXIMA). Each camera input is completely independent - image compression and image resolution can be adjusted on a camera by camera basis. All images are protected against tampering or modification via encryption.

Neural Network based Smart Search

Real Time Neural Motion Detection

Motion detection can be individually programmed on a per camera basis. SPECTIVA's powerful Motion Detector (based on Neural Networks algorithm) can handle internal as well as more demanding external environmental conditions and provide exceptional reliability and accuracy of motion detection. Individual sensitivity, area of interest, object size, etc. can be selected for each camera.

Artificial Intelligence Smart Video Search

SPECTIVA DVMS is equipped with an "intelligent" video search facility in which it is possible to create filters and search recorded video footage for images with user-defined/selected objects (e.g. a red car). Let SPECTIVA retrieve all images from a specified period of time where the selected object is present. If you let SPECTIVA know what you are looking for it will continue to learn (using a proprietary Neural Networks based algorithm) as it analyses the video images. The characteristics of the originally selected object will be further refined from the "seen" images. The end result is video footage of interest only (with the desired object in it), from days of activity – in a fraction of the time it would take an average human to review and retrieve it.

Anti-terrorism Feature

SPECTIVA's new Neural Motion Detector can be deployed as a monitoring tool for potential terrorism activity – detect anything or anyone within any camera view and raise an alarm if the subject's behavior is suspicious.

Replay Motion Detection

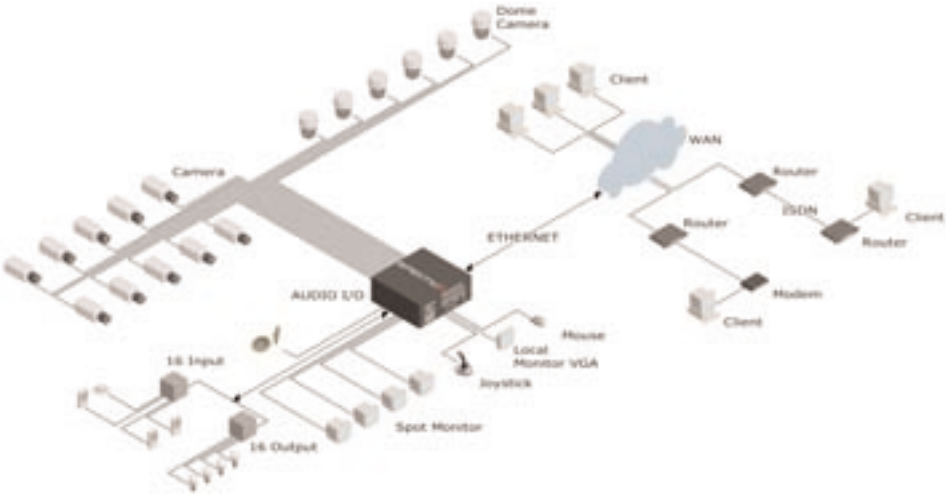
The same real time motion detection can also be applied "after the fact" during replay. Select the object/area to be tracked/searched, apply the desired motion detection/neural filters and select the time window to search. Images meeting your criteria are quickly highlighted for review.

Multiple Analogue Displays

One VGA and up to sixteen standard analogue spot CCTV monitors can be connected to SPECTIVA Real Time DVMS. There are 2 or 4 analogue spot monitors available for the multiplexed model in addition to the loopthrough outputs. Live camera to monitor switching functionality is built-in – SPECTIVA (Multiplexed model) is a powerful 4,8 or 16 input / 2 or 4 output video matrix switcher as well.

Audio

In addition to excellent quality video, Our real time models of SPECTIVA DVMS can record up to thirty-two channels of audio. Associate many cameras with an audio source. Transmit live and recorded audio – fully synchronised with video. As with most SPECTIVA DVMS features, audio recording, playback and bi-directional transmission are done simultaneously, can be accessed remotely and do not affect any other function of SPECTIVA DVMS.



Flebile, Multistream Recording

SPECTIVA DVMS are capable of multiple recording speeds and can adjust any camera recording rate "on the fly" in response to varying conditions. Simultaneous Prime, Time-lapse, Alarm camera recording can be accommodated with customized recording speeds per sector. For example, the unit can be time-lapse recording sixteen cameras when an alarm condition is detected relating to camera one, e.g. the Commercial Teller. The DVMS continues to record the time-lapse images while simultaneously recording camera one in real time until the alarm condition clears. This feature can be programmed in many different combinations of cameras, recording rates, motion detection and external alarm inputs. The use of separate sectors makes review of each category simple and fast!

Pentaplex Functionality

SPECTIVA DVMS provides real time functions of recording, playing, viewing, archiving and transmitting video and/or audio. Recording never stops.

Hardware based Wavelet compression

Wavelet compression algorithm provides for very high degree of visual quality even at very high compression rates with no blocky artefacts in the compressed image. Our unique hardware implementation of Wavelet based compression gives to CIEFFE's DVMS the ability to process many high resolution full frame images coming from up to 16 unsynchronised cameras, in real time!

Delta Wavelet

SPECTIVA DVMS relies on a proprietary conditional refresh wavelet based transmission algorithm to make high quality video over extremely low bandwidth a reality. Delta Wavelet is based on MPEG4 algorithms and provides unmatched levels of visual quality in relation to available bandwidth. Delta audio transmission is based on an Enhanced GSM algorithm standard for optimum voice quality. As with Variable Image Resolution, Delta Wavelet can be enabled with a single mouse click at any time. The quality of recorded images at the server is unaffected: the image quality and the recording rate are not dependent on transmission image quality or rate.

Variable Transmitted Image Resolution and Audio Quality

Transmitted audio and video quality can be adjusted "on the fly" from every SPECTIVA workstation. Switch image resolution (Full - 720 x 576 pixels, CIF - 360 x 288 pixels or QCIF - 180 x 144 pixels) so as to increase refresh rate of incoming images or maximise visual quality of incoming images. Audio quality is automatically adjusted to match the available bandwidth.

Long Audio/Video Storage Periods

CIEFFE's DVMS recorded audio and video can be stored online! – The recorded images and audio are stored on HDDs and quickly accessible. Forget video tapes or human intervention - CIEFFE's DVMS server can be equipped with up to 1280 GB of IDE HDD storage onboard to last you a very long time.

Optional RAID 5 Data Protection

CIEFFE's DVMS can be configured with up to 1280 GB of RAID 5 fault-redundant storage onboard. This eliminates the need for round-the-clock backup and prevents data loss and downtime due to HDD failures.

Optional External Storage

For extremely demanding audio/video storage requirements, CIEFFE's DVMS offers sophisticated RAID 5 fault-tolerant external IDE based storage providing you with cost-effective way to store many months of audio/video online. The storage is scalable from 700 GB to 16.8 TB of RAID 5 and is 19" rack-mountable.

Embedded Technology

Embedded Operating System ensures maximum efficiency, system uptime and reliability. Rich networking and storage features, superior compatibility with a large array of hardware devices is unmatched by any other computing platform. Every SPECTIVA DVMS has a built-in VisionWeb Web Server. View live or recorded images, listen to live and recorded audio or control PTZ cameras over any TCP/IP connection within Internet Explorer web browser. No special software is required. Intelligent bandwidth/picture content sensing and variable transmission quality make many IPS and streaming audio possible even over very low bandwidth communication lines.

Full Remote Control and Audio/Video Transmission

Thanks to the true client-server architecture SPECTIVA DVMS lets you view live/recorded video and audio, control, configure and perform software upgrades remotely, with no functional differences between operating locally or remotely.

Single Client Platform

All CIEFFE software works with any CIEFFE DVMS. The clients are completely hardware independent and can log into others 4, 8, 16 and Real Time units without any additional add-ons or configuration. Software transparency allows a single client machine to control many different models and versions.

CIEFFE ActiveX Developer's Kit

CIEFFE DVMS is an open platform that lets you interface third party equipment or develop your own client applications. All functionality, including live, playback, PTZ control, smart find and even Delta Wavelet and server configuration is available through CIEFFE high level APIs.

Camera Boost

SPECTIVA DVMS (Multiplexed) can be configured to automatically increase or decrease camera recording rates in response to camera activity. View/record at a few IPS most of the time and let SPECTIVA boost the recording quality all the way up to 25 IPS when motion is detected or the camera is alarmed. Manually boost any camera to 25 IPS while viewing important cameras and use the unit as a digital video-matrix switcher!

True Full Screen

No Windows! View or play cameras in single or arrangements of 4, 9 or 16 cameras (arrangements definable by user). Switch between video window and full screen mode with a mouse click. Easy to use, unique mouse and joystick PTZ control is available in both window and full screen mode.

Activity Camera Display

SPECTIVA DVMS "active" live view automatically selects and displays only those cameras which are being recorded. 1, 4, 9 or 16 split is automatically applied so that all active cameras can be displayed. Full screen active live view is available.

Pre-Motion and Pre-Alarm Recording

SPECTIVA DVMS automatically records four seconds of pre-motion video and audio and up to 15 minutes of pre-alarm video and audio (configurable by user). No special programming is required and the pre-motion/pre-alarm audio/video status does not affect any other recording modes already in effect.

Pan, Tilt & Zoom

PTZ Control is fully integrated in SPECTIVA DVMS. PTZ-capable cameras can be controlled from the SPECTIVA DVMS or any network connected workstation. Experience exceptionally responsive PTZ control – virtually no latency regardless of the available bandwidth! Easy, intuitive control of movement is available by dragging the mouse cursor on the video, by PTZ graphic control panel or joystick. PTZ, Focus and Iris controls are available. PTZ camera tours and presets are fully integrated and can be invoked and configured remotely or associated with events. PTZ cameras can be controlled in full or 1, 4, 9 or 16 way split screen. Currently supported PTZ camera protocols include: Sensormatic, Ultrak, Panasonic, Pelco, Samsung, Philips, Star Micronics, Kalatel, Vicon, JVC, Alec Dragon and others.

Virtual Zoom

SPECTIVA DVMS provides a special built-in virtual digital zoom facility which is available to both FIXED and PTZ cameras. Virtual digital zoom is available for live images as well as during playback. This facility offers superior image enlargement in real time for all cameras at all times!

Instant Replay

Activity catches your eye in a monitor? Any SPECTIVA DVMS camera can be instantly replayed from the operator's screen while recording continues unaffected!

Alarm Inputs/Relay Outputs

Each unit has 4, 8 or 16 external inputs and each is individually programmable. 4, 8 or 16 relay outputs are built-in and available for manual or automated remote control of external devices such as lights, gates, other alarms, etc.

Software Alarm Inputs

Each SPECTIVA DVMS unit can be provided with a soft alarm interface via our ActiveX Developer's Kit. This interface allows communication with third party systems e.g. access control systems, video matrix switches etc. High-level software alarms can initiate SPECTIVA recording of cameras in response to events generated or monitored by the third party systems.

Loopthrough

SPECTIVA has 4, 8 or 16 composite BNC loopthrough video outputs – install SPECTIVA DVMS before or after existing video equipment.

Privacy Patch

Restrict operators from viewing sensitive areas by deploying SPECTIVA privacy patch function (definable per camera). Black or mosaic patches ensure people's privacy is protected against "prying eyes".

Easy to Use

Intuitive Graphical User Interface, including mouse and game joystick controls. SPECTIVA DVMS GUI has been designed with simplicity and effectiveness in mind.

Speed Start

A simple auto-configuration is provided to allow rapid use of the unit after installation. SPECTIVA DVMS will automatically detect video format (PAL or NTSC) and the number of connected cameras, disks, PTZ camera protocols etc. Recording speeds and disk space will be equally divided for a quick start.

VCR Controls

SPECTIVA DVMS provides superior playback quality, features and performance. Play images forward or in reverse, image by image, at single speed or 2x, 4x... up to 512x from any point in recorded video. Full screen playback is available.

Fast & Easy Image Find

SPECTIVA DVMS makes retrieving any recorded image quick and easy. Find facility is surprisingly simple and effective! Get immediate access to some or all of the recorded video via scalable time-line and camera rows. Find images in seconds, via intuitive interface: click on the desired camera and the image instantly appears in a high resolution preview window – everything is online. Change the time scale to go back weeks or drill in to the second... or select specific date, time and camera to pinpoint the exact image you are looking for. Random image access has never been easier!

Image Touch-up

Each image recorded by SPECTIVA DVMS can be digitally enhanced. Tools like Gamma, Saturation, Sharpen, Blur, Contrast, Brightness, Equalize, Invert, Flip, Reverse and Mosaic are provided for image enhancement. Digital Zoom facility is also available.

Video Text Insertion

Capture text input coming out of third party devices (tills, ATMs etc) and record transactional information together with recorded video to have a complete record. Captured data can than be superimposed onto recorded images. Search through recorded video by transactional detail criteria.

Analogue Video Export

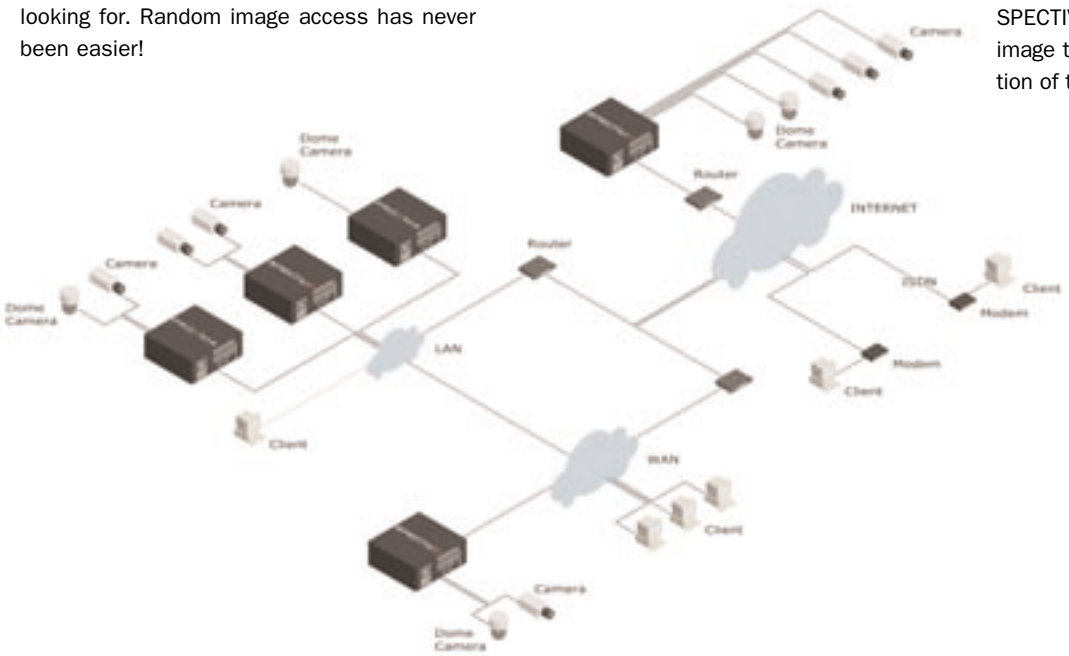
Should you need to export video to a conventional VHS/SVHS tape, SPECTIVA DVMS server and/or client can be configured to provide you with the functionality that you need. Export recorded single or live single, quad, 9 or 16 camera view!

Multiple Image Export Formats

Any image can be exported to a local or network printer. Additionally, images can be exported in your choice of Wavelet, Bitmap, or JPEG (tamper-proof) image formats to any supported media or device. Video clips can be exported as Wavelet Movies (tamper-proof) in our native Wavelet format or as standard Wavelet or MPEG4 AVI movies playable by Windows Media Player and other standard software.

Image Print

SPECTIVA can retrieve and print any recorded image to a local or network printer. The resolution of the printed image is user selectable.



CIEFFE Enterprise Management System

PROXIMA MANAGER enables simultaneous communication with many network-connected units. View live video or playback multiple cameras from multiple CIEFFE servers at the same time. Import BMP and WMF files as site overview/plans and navigate easily through large, multi-server sites. Use Virtual Video Desktop to display as many cameras as you can fit in your display resolution. Create custom camera layouts for optimum camera viewing – in a window or in full screen! Create logical groups of network connected resources (cameras, alarms and auxiliary outputs) and manage enterprise installations with ease from a central location. Direct and automate network connected RemoteControl clients via centrally managed scripts. SPECTIVA RemoteControl single-server client is extended to multi-server environments.

Networking

SPECTIVA DVMS is exceptionally versatile and can be networked via LAN, WAN, PTSN, ISDN, xDSL, Microwave Link. Unlimited number of SPECTIVA servers can be networked and accessed by one or more client PCs. Any SPECTIVA DVMS can operate either standalone or as a server, maintaining undiminished system performance levels while having many network users connected on-line simultaneously.

Sophisticated Password Controls

Comprehensive password control allows the administrator to individualise operator functions on a function by function, camera by camera and time of day basis, thereby providing for powerful and flexible user access management.

Encrypyed Network Communications

All SPECTIVA DVMS network traffic can be encrypted for added security and protection against network sniffing.

Time Synchronization

CIEFFE's DVMS servers can utilise a single time source! Time synchronization is automatic and ensures all cameras are time stamped with the correct time. Transparent daylight savings time management – no data loss due to time changes. Synchronise SPECTIVA DVMS with third-party devices such as video matrix switchers, access control systems and enjoy the benefits of a single time source security system!

Network Storage

SPECTIVA DVMS can make use of any network connected storage drive or device (bandwidth dependent) in addition to or instead of the HDD storage provided onboard. This unique ability allows for true flexibility of storage management – have all cameras stored locally, all cameras stored in a central audio/video data warehouse or something in between! Hot fail over between storage arrays means no lost recording due to HDD failure or network disruptions.

Backup

SPECTIVA can backup automatically to any local or network connected compatible backup device. Backup process is automatic and does not interrupt or interfere with any other function of the system. Backup scheduling is fully configurable, providing you with the ability to choose what is backed up, in what quality and when.

Directed Network Alarm Display

Any SPECTIVA DVMS server can send alarm video immediately to network clients running our remote software! You may direct video and audio on an alarm by alarm, client by client basis.

Scripting

Operation of SPECTIVA DVMS can be fully automated by custom scripts. CIEFFE scripting language can be used to write macros which execute automatically with no user intervention.

RemoteView TCP/IP Client

SPECTIVA RemoteView is a simple client software that enables full live and recorded viewing, playback and PTZ control. It is also used as a wavelet movie viewer. RemoteView is compatible with all Windows 95b, Windows 98, Windows Me, Windows NT 4.0, Windows 2000 and Windows XP systems.

CIEFFE VirtualMachine

Our general purpose serial (RS-232) interface script engine allows non TCP/IP aware devices (e.g. video matrix switches, legacy access control systems) to effortlessly communicate with multiple units across the network. SPECTIVA VirtualMachine has access to all functionality available in CIEFFE ActiveX. Exchange event information between systems, trigger recording or make a unit a transparent subsystem of a third party device.

	SPECTIVA LC4 DVMS	SPECTIVA LC8 DVMS	SPECTIVA LC16 DVMS	SPECTIVA 16 DVMS
Video Inputs	4	8	16	16
Loopthrought	Yes	Yes	No	Yes
Matrix Analog Outputs	No	2	No	4
Audio Inputs	4	4	4	4
Audio Outputs	1	1	1	1
Alarm Inputs	4	8	16	16
Auxiliary Outputs	8	8	16	16
Interface	VGA	VGA	VGA	VGA/SVHS/CVBS
Recording Speed	50/60 Ips	50/60 Ips	50/60 Ips	50/60 Ips
Standard Internal Storage	80GB	80GB	120GB	120GB
Optional Internal Storage	240GB	240GB	240GB	1.200GB
Network Storage	Yes	Yes	Yes	Yes
Compression Algorithms	Wavelet / Delta Wavelet / MPEG4	Wavelet / Delta Wavelet / MPEG4	Wavelet / Delta Wavelet / MPEG4	Wavelet / Delta Wavelet / MPEG4
Communications	Ethernet 10/100 Mbit / ISDN / ADSL	Ethernet 10/100 Mbit / ISDN / ADSL	Ethernet 10/100 Mbit / ISDN / ADSL	Ethernet 10/100 Mbit / ISDN / ADSL
Enclosure	Desktop 2U	Desktop 2U	Rack Mount 4U	Rack Mount 4U

	SPECTIVA RT4 DVMS	SPECTIVA RT8 DVMS	SPECTIVA RT16 DVMS	
Video Inputs	4	8	16	
Loopthrought	Yes	Yes	Yes	
Matrix Analog Output	No	No	No	
Audio Inputs	8	16	32	
Audio Outputs	1	1	1	
Alarm Inputs	4	8	16	
Auxiliary Outputs	4	8	16	
Interface	VGA/SVHS/CVBS	VGA/SVHS/CVBS	VGA/SVHS/CVBS	
Recording Speed	100/120 Ips	200/240 Ips	400/480 Ips	
Standard Internal Storage	160GB	320GB	640GB	
Optional Internal Storage	1.200GB	1.200GB	1.200GB	
Network Storage	Yes	Yes	Yes	
Compression Algorithms	Wavelet / Delta Wavelet / MPEG4	Wavelet / Delta Wavelet / MPEG4	Wavelet / Delta Wavelet / MPEG4	
Communications	Ethernet 10/100 Mbit / ISDN / ADSL	Ethernet 10/100 Mbit / ISDN / ADSL	Ethernet 10/100 Mbit / ISDN / ADSL	
Enclosure	Rack Mount 4U	Rack Mount 4U	Rack Mount 4U	

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