White Paper

Glossary of CCTV Terms

A short list of terms that are typically encountered in reference to CCTV/Security systems..

This is a short list of terms that are typically encountered in reference to CCTV/Security systems. For the most part these are practical definitions of the terms. For more information on many of the terms listed here check the document pages of my website at www.compaircctv.com.

A&E: This is an acronym for Architect and Engineer. It refers to a person or a firm. In reference to CCTV, an "A&E" can range from a single individual consultant that provides customers with valuable product and industry information, to a large firm that manages entire construction projects and all the associated systems that are installed in the building. CCTV/security is only a small part of the overall project.

A&E Specifications: "A&E specs" in CCTV are written technical specifications for individual products. Theoretically the A&E (or the customer) writes the specifications to be put out for bid to selected sales organizations. Manufactures typically "help the process" by providing A&E specifications for their products and the A&E can cut and paste the appropriate parts into the official spec. There is no real standard for the format of these documents in the CCTV/security industry so they can vary widely in format from one manufacturer to another. Some manufacturers are writing their specs to adhere to the CSI (Construction Standards Institute) format. See CSI.

Active X Commands: This is a Microsoft program interface to share information between programs. Browser based programs use Active X components for viewing video from DVRs.

Activity Log: This log is a gathering of information about system operation. In a DVR it would list occurrences like log on/log off, menu access and changes, remote connections, and any other operation information that is relevant.

AGC: Automatic Gain Control automatically increases the video signal in low light conditions. AGC is available in many cameras and some other CCTV devices.

Alarm Activated VCR: After pressing `record', a normal VCR takes about 20 seconds before it starts recording usable pictures. With an alarm activated recorder it can be set so that the tape is ready to start recording in about one second. The signal to begin recording can be from an alarm or any other input.

Alarm Inputs: Any activity that provides a trigger for an alarm action. This can be a physical wired device, a recognized video motion change, or any recognized changes in data that are selected to provide an output alarm.

Alarm List: This is a list of alarms that have occurred in the unit. The list typically indicates the time/date, the type of alarm and any other information that is deemed relevant by the design.

Algorithm: A consistent method of steps used to accomplish a task. In CCTV it often refers to video compression algorithms.

Alpha Test: This refers to the first outside the development group testing on a newly developed product. The product is still in the development stage and bugs are to be found and corrected before initial shipments.

Analog: In reference to CCTV, this refers to systems and components that use the standard NTSC/PAL composite video formats. Digital refers to devices that use pixel formats. The definitions become blurred when you consider that DVRs convert the analog signal into digital form to process the images internally, they convert back to analog to output to other devices. Details aside, many people refer to analog as old technology and digital as the new technology.

Aperture: The light gathering area of a lens, controlled by the iris.

API: An acronym for Application Program Interface. This is used by programmers and refers to the interface providing the calling conventions for an application program to access the operation system.

Application: How a product or system is used to solve the customer's problem. Application is how the operator uses the system to accomplish his job. See Vertical Market for a marketing definition of applications.

Applications Support: This refers to the organization and individuals that provide pre-sale support to clarify issues, select products and design custom systems.

ASCII: An acronym for American Standard Code for Information Interchange. This is a standard format for sending data.

Aspect ratio: The ratio of the vertical to the horizontal image size. This is usually 4:3 for analog video. A wide screen monitor typically has a 16:9 video format option.

ATM: An acronym for Automated Teller Machine. It also is an acronym for Asynchronous Transfer Mode (a data communication method).

Attenuation: This refers to signal loss in a transmission system over distance.

Automatic iris (Auto Iris): A lens that adjusts automatically to allow the right amount of light to fall on the imaging device. There is a tiny motor and amplifier built in which receives a control signal from the camera to maintain a constant one volt peak to peak (1.0 Vp-p) video level.

Auto Tracking: This refers to the ability of a PTZ camera to sense movement in the image and follow the movement wherever it goes. The actual intelligence for the function can be in the dome or in the DVR. The advantage is that you can follow the movement of an individual anywhere within the range of the camera. This comes under the heading of video analytics.

AVI: An acronym for Audio Video Interleaved. This is a typical video format used in the PC world that can be read by a variety of standard programs. Some DVR manufacturers can export video to AVI files for easy review in a standard PC.

Back focus: A mechanical adjustment in a camera that moves the imaging device relative to the lens to compensate for different focal lengths of lenses. This is important when a zoom lens is installed.

Back-up Device: This is a generic term used to describe any device used to extract video from a DVR. You could back up files to any connected device such as: a server on a network, an external hard drive, a thumb drive/flash drive or a CD/DVD.

Balun: (Video balun): This is a device that allows video to travel over twisted pair wire (rather than coax RJ59 cable). This device matches the impedances of the different signals. Balun stands for balanced-unbalanced. A balun is required at the camera and at the receiving device (DVR, monitor, etc.). Baluns can be passive or active (with amplification). Passive distance can be up to 1,000 ft. Active can be up to 3,000 or more. Count on less than half that distance with a DVR.

Bandwidth: Device bandwidth is the range of signal frequencies that a piece of audio or video equipment can encode or decode (the operating frequency). Video uses a wider/higher frequency range than audio, thus requires a wider bandwidth.

Bandwidth (Network): In computer networks the bandwidth is a function of the network design. A typical LAN (leg) within a network has a maximum bandwidth based on the hardware installed. 100Mbps is common. Gigabit

network switches are becoming more common. All devices on the network share the total available bandwidth. Devices that take up a large percentage of the available bandwidth (like video) are a concern to systems administrators.

Bandwidth limiter: This refers to a feature in some DVRs and Remote Software that limits the size of the network traffic provided. This feature restricts DVR/Remote software communication so more bandwidth remains available for other network traffic.

Barcode: A series of coded lines that contain encoded information. Example: The UPC code (Universal Product Code) is standard on all products sold in supermarkets.

Base Band Video: This is the video signal used in CCTV. It is the NTSC or PAL format minus the broadcast frequency modulation and many other embedded signals used in Broadcast TV. It consists of video, horizontal sync and vertical sync. This is all that is required to view a video signal on a monitor.

Beta Test: This refers to initial testing of a newly developed product that is ready to ship. Terminology differs between manufacturers. Usually by this stage major bugs that would stop shipment of the product are less likely than in the alpha test stage.

Biometrics: In CCTV biometrics refers to the hardware/software used to recognize body parts as a method of individual identification. Biometric readers can scan and identify finger prints, Iris and Retinas. Facial recognition is another biometric recognition that comes under the category of video analytics.

Bit Rate: Bit rate is measured in bits per second. In IP video it usually refers to the bit rate from an IP camera. Controlling the bit rate controls the bandwidth needed to transfer data from the camera. The camera processor will automatically limit the maximum bit rate sent from the camera to the bit rate setting selected.

Bits: Individual parts of data communication. A bit is the smallest part of the overall data stream. Serial communication is measured in bits per second (RS-232, RS-485, etc.).

Black Pixels: This refers to hidden (unseen) pixels when megapixel cameras produce more pixels than can be seen on the monitor used for display. This is an issue as cameras usually lead the pixel count charge. Monitors can't display all the pixels available and must "scale" the image (remove/rearrange pixels) to accommodate the display capability. Although you may be paying for more pixels than you can normally display, there is good news when you zoom in on a megapixel image. Those black (hidden) pixels can now be used in the expanded portion of the image providing the same quality level with expanded images. This avoids the fuzzy look produced by standard resolution zoomed images.

BNC: This is the standard connector type used in CCTV. It provides an easy snap-on connection for a coax cable. What BNC stands for is less clear. Some say it means British Naval Connector. Others attribute it to the type and the inventor; Bayonet Neil Councilman.

Browser: In video most manufacturers recommend Internet Explorer as the browser connection for their products. You can access DVR, NVR and IP cameras just by entering the IP address in the browser command line.

Browser Based DVR Remote Software: Browser based programs can allow anyone to connect to the DVR as long as they have the site name and the logon information (user name and password). You don't have to physically have the program on disk. Once you connect to the DVR site using your Internet browser (like Internet Explorer) the DVR sends you all the information you need. So the remote program is resident in the DVR (the server site) and the Browser user is the remote client. The program is downloaded from the server (DVR) to the client (remote user's PC).

Burn Rate: This refers to the required storage for recorded information. The burn-rate is the maximum storage needed to record for one hour. Once you know this number you can size the system by simply multiplying the burn-rate by the number of hours the customer needs to keep the data. (GB/hr. = Avg. image size, x # of images/sec, x # of cameras, x 60 [sec] x 60 [minutes]).

Bytes: A byte is typically a series of eight bits. This is enough information to represent a single alphanumeric character. Parallel communication is measured in bytes (memory sizes, hard drive sizes, etc.).

Cable Modem: This is a modem that allows you to connect to the Internet through your TV cable company. Speeds are similar to DSL.

Call Monitor: This is a secondary monitor connected to a DVR, Multiplexer, etc. This is also called a Spot Monitor. The video displayed is typically a single image. Some units provide multiple outputs.

Cameo: Refers to an individual video image in a multi-screen display.

Camera: This is the basic video collection device that has many forms and configurations. Some are: box cameras (require a separate lens) bullet cameras (slim line all in one construction) dome camera (all in one in a dome design) PTZ camera (mounted on a PTZ platform device) PTZ dome (all in one package). An IP camera can be any of these and connect directly to a network.

C-Mount /CS-Mount Lenses: C-Mount cameras and lenses were the first used in CCTV applications. The lens screws directly into the camera providing a distance of 17.5mm between the back of the lens and the imager. Current CS lenses are smaller and better suited for smaller cameras. The lens to imager distance is 12.5mm. A 5mm spacer called a C-ring, or C-mount is used with CS lenses to bring the lens to imager distance to 17.5mm.

CAT-5 Cable: This refers to category-five cable. This is the typical cable wiring used in Ethernet networks. The cable contains four sets of twisted pair wires. The end connectors are RJ-45 connectors.

CCD: Charge Coupled Device: It is light sensitive and forms the imaging device of most modern cameras. Size is measured diagonally and can be ¼" 1/3," or ½."

CCIR: Commite Consultatif International Radiotelegraphique. This is a standards committee of the International Telecommunications Union, who made the technical recommendation for the European 625 line standard for video signals (black and white).

CCTV: An acronym for Closed Circuit Television. Originally this was described as a system with cables directly from cameras to viewing devices with no outside world connections. The Internet has changed all that. Now you can access any DVR with browser software through the Internet.

Central Station Monitoring: Monitoring a large number of remote DVRs from a central location using remote software.

Chrominance: This is the color portion of a composite video signal (See Luminance).

CIF: An acronym for Common Intermediate Format. This is a format for digitized video. CIF typically indicates a pixel format of 320x240.

Client Server Network: This is a network where a server (an unattended PC) stores information and shares it with the clients (the attended workstations). The clients depend on the servers for normal operation. The workstations do not necessarily talk to each other.

Client: In CCTV DVR context the Client is the PC running the remote software that accesses the DVR or other device. The device originating the video is the Server.

CMOS: Acronym for Complementary Metal Oxide Semiconductor. This type of IC (Integrated Circuit) technology is used in a wide range of analog circuits. CMOS is used for camera imaging. CMOS cameras were originally low in quality but improvements have been made to the point where they can compete with CCDs quality wise in many applications.

CMS Software: This is an acronym for Central Management Software. This is a generic term used to indicate the installable remote software packages provided by any DVR manufacturer. Each manufacturer has a specific name for their CMS product.

CODEC: This stands for Compressor/de-compressor. Some people call it encoder/decoder. This refers to the software that compresses and decompresses video.

Coexistence: Coexistent systems allow operation of analog and digital video systems using the same PC as the portal to all video management. The term was coined by Infinova. They won an accolades award at ASIS 2010 for using V2216 software to control both analog switches and IP cameras.

Competitive Test: This refers to testing of a competitor's similar product entry. This is best performed as a side by side test.

Composite Video: The complete visual wave form of the color video signal composed of chrominance and luminance picture information; blanking pedestal; field, line, and color sync pulses; and field equalizing pulses. More simply for CCTV purposes it contains the video signal and horizontal and vertical sync pulses on a single wire.

Compression: Video must be compressed in size in order to make it manageable in the record and remote transmit functions. Typical compression standards include M-JPEG, MPEG-4 and H.264. Some DVR manufacturers use proprietary compression methods that are usually modified versions of the standards.

Convergent Systems: This combines analog and IP solutions by using video encoders to convert analog cameras into an IP stream for control with an NVR (the convergence of analog and IP).

Covert Camera: A covert camera is not visible to the operator of the system. It is intentionally obscured from view and often used for surveillance of employees. An authorized operator with the proper password privileges can view the camera and recorded information.

CRI (Color Rendition Index): This is a measurement of how accurately a camera captures the reflected color in an image (a scale of 1 – 100). High CRI numbers provide the best results. Faithful color rendition in lighting is said to improve the morale of those working in the environment.

CRT: Cathode Ray Tube. This is the picture tube of a normal monitor or television.

CSI: An acronym for Construction Standards Institute. CSI standards cover the entire construction process of buildings including all the systems installed in the building. CCTV/security is only one system of many included in the specs. Some CCTV manufacturers are writing their A&E specs to follow the CSI format.

CVBS: An acronym for Composite Video Baseband Signal. This is the portion of the NTSC broadcast video signal that is used in traditional CCTV. It is the basic video composite signal (video, horizontal and vertical sync signals) minus the carrier frequencies, audio, closed caption and many embedded signals used on broadcast video. Interestingly, the same acronym is also used for Composite Video Broadcast Signal.

Data Lifetime: This is the name generally given to a feature that ensures that data is not retained on the system for more than a specified amount of time. This is a legal requirement in many European countries.

Day/Night Operation: This refers to cameras that are capable of providing usable images at night by changing camera parameters to work more efficiently in low light. A basic example of day/night operation is the use of IR LEDs within the camera housing. Some very inexpensive cameras can provide usable images in total darkness. More sophisticated changes in more expensive cameras include switching the camera to black and white mode at night and reducing the image capture rate to allow more light to reach the imager.

Dealer: In reference to CCTV, this is a generic term used to indicate individuals or companies that sell products to end users. Dealers come is all sizes and capabilities. They buy from manufacturers or distributors and design CCTV systems to meet individual customer needs. See "All you wanted to know about sales channels" for more details on the distribution process at www.compaircctv.com.

Decibel (dB): A logarithmic measure of the ratio between two powers, voltages, currents, sound intensities, etc. Signal-to-noise ratios are expressed in decibels.

Depth of Field: This is the in-focus range of the image produced by the lens. Objects in the focus area are clear. They will become less clear as they get closer to, or further away from the camera. The distance of the area of clear focus is the depth of field.

Distribution: This is the term given to indicate the overall distribution process where manufacturer's goods are purchased by intermediaries and eventually sold and installed at end users. See "All you wanted to know about sales channels" for more details on the distribution process at www.compaircctv.com.

Distributors: In reference to CCTV, this is the term used to indicate companies that provide products to a wide range of dealers. This is part of the overall distribution process. Distributors buy in bulk from many manufacturers and sell to dealers at wholesale prices. See "All you wanted to know about sales channels" for more details on the distribution process at www.compaircctv.com.

DNS: (Domain Name System): Matches Internet computer names to IP numbers. This allows you to type in the URL (www.abc.com) instead of the IP address (172.20.1.99).

Driver: (Device Driver): A driver is a software program that allows a computer to communicate with a peripheral. You need the appropriate driver to allow your printer to work with your system. Many drivers are available on a PC as part of the operating system. However, don't depend on this as drivers for devices newer than the operating system will not be installed. You typically get a copy of the driver with the purchased device. The manufacturer's web site is a common place to get the latest available drivers for a device. Drivers are often referred to as DLLs (dynamic link library). Virtually all drivers used in CCTV devices are proprietary. So once you get away from the standard stuff you have to rely upon the manufacturer's good will for interface help.

DHCP: This is an acronym for Dynamic Host Configuration Protocol. This is a function that allows a network to automatically assign an IP address to a PC when the user logs on to the system. All devices on a network require an IP address. DHCP does this automatically. The alternative is to manually enter a static IP address in each device.

Dial-up: This is a slow speed network connection using ordinary telephone lines and modems. The maximum connection speed is reported as 56K but most provide closer to 30K.

Digitized Signal: This is an analog signal that has been converted to a digital form so that it can be processed and altered.

Digital: In CCTV, digital refers to devices that operate in pixel formats. Analog video devices use traditional NTSC and PAL formats. The lines of difference are blurred when you consider the analog signal is converted to digital and

back again (often several times) within a traditional CCTV system. Pure end-to-end digital video is achieved using IP cameras through a network to NVRs and LCD monitors.

Digital Zoom: This refers to enlarging a portion of an image by adding additional pixels within the image to fill the larger area. It makes the picture area larger at the expense of video quality. The intelligence for this feature can be in a camera or a DVR.

Distribution Amplifier: Distribution amps take an incoming video signal and split it into separate signals that are sent to multiple devices. Dist. Amps come in a range of sizes (1x4, 16x4, etc). Despite the name, few of these devices actually amplify the Video signal. They separate and distribute a single input to several outputs. They don't increase the maximum cable distance.

Domain: A number of computer devices administered as a group. A Domain server is set up and maintained by the network administrator (the person in charge of the network).

DSL: An acronym for Digital Subscriber Line. This is a high speed network connection typically used in homes and businesses.

DSP: Acronym for Digital Signal Processor. DSP chips compress video freeing the CPU processor for other tasks. This increases compression capabilities at an additional cost.

Dual Stream: This term is typically used to indicate a device capable of providing two different video compression methods. An example is a DVR that shows live video in M-JPEG and transmits to the remote software using MPEG-4. IP cameras often have selectable (dual stream) transmit capability. This may sometimes refers to two streams of the same compression method with different parameter settings.

DVR: An acronym for Digital Video Recorder.

DVD: An acronym for Digital Video Disk. This is the standard media used for PCs and movies.

Dynamic IP Address: This refers to IP addresses that are automatically assigned to a network device when the user logs on to the system. See DHCP.

EIA: The American 525 line standard for the Black and White video signal.

EIDE: Enhanced Integrated Drive Electronics. This is the cable connection from a PC motherboard to a disk drive, CD drive or other devices. This is an eighty pin ribbon connector cable. This is a later development to IDE.

EIS: Acronym for Electronic Image Stabilization. This feature is an option on some camcorders. It helps to keep the image from shaking with hand held movement. This feature is available in some CCTV cameras.

E-Map: (Electronic map). This term is used to describe a feature on some DVRs. It allows you to import an image (like a layout drawing of a building) and place camera icons within the image to represent installed camera locations. Some allow you to click on an icon to see the actual camera video, initiate and cancel alarms, etc. Also see GEO map.

Embedded (DVR): This is a manufacturer designed hardware platform for a DVR. It may share many functions with a traditional PC platform but it is a proprietary design that is unique to an individual manufacturer.

Enterprise Software: This is a term used to describe control software used to manage multiple systems. CMS (Control Management System/Software) and VMS (Video Management System/Software) are often used interchangeably.

Event: In CCTV context an alarm event is anything that can be distinguished from normal activity. Examples include; wired alarms, motion alarms, operator triggered alarms, S.M.A.R.T alarms and test exception alarms. See S.M.A.R.T.

Export: In CCTV DVR context export refers to saving a selected clip of video to an external device for the purpose of reviewing the clip in a standard PC.

Factory Defaults: This term refers to the initial menu settings of a device when it was shipped from the factory. When problems are encountered after changing menu settings it sometimes helps to restore the factory settings and start over.

Factory Representative: This refers to the individual(s) or the firm that represents a manufacturer's products within a selected territory. This is an indirect sales method and part of the overall distribution process. See "All you wanted to know about sales channels" for more details on the distribution process at www.compaircctv.com.

Fiber Optic: This refers to a communication hardware method using fine fiber optic tubes to transmit light pulses. Standard data communication methods can be converted to fiber and back again at the receiving end. This can be pricy but very effective over miles of distance.

Fiber Optic Backbone: This refers to an infrastructure of fiber connections within a campus, area, city or country. A fiber backbone provides a great method for sending very large amounts of data (video, etc.) over long distances. The best example of this is in mainland China. We don't have much of it in the US yet.

Field: Each complete video image in NTSC/PAL (frame) is composed of two fields. One field consists of the odd numbered lines in the frame and the other field consists of the even numbered lines. The viewed together in rapid succession forms the complete frame image. The NTSC and PAL formats called for double scanning fields to reduce the visual flicker that was common on early TV monitors. Monitors got better over time but the "standard" did not change. Each individual field independently forms a picture. A CIF image is typically derived from a single field. 4CIF (and D1) images require a full frame.

Field of View: This is the entire visible area of the image produced by the camera/lens.

Flash Drive: A small USB memory device. Connect it to a USB port to import and export files. These devices are commonly used to export video from a DVR, upgrade firmware, etc. These are also called Thumb Drives.

Focal length: The distance between the secondary principal point in the lens and the plane of the imaging device. The longer the focal length, the narrower is the angle of view.

Frame: The combination of two interlaced fields. The frame frequency is half the field frequency.

FTP: (File Transfer Protocol): Transfer documents between different types of computers.

Gateway: This is the hardware/software device used to connect LANs with dissimilar operating systems. The "gateway" often refers to an Internet connection. The gateway is a single device that provides a single IP address to the outside world and routes traffic to the appropriate internal IP addresses.

Geo Maps (Geographical Maps): Usually more sophisticated that E-maps, these maps may provide more functionality. The actual background map can be any file including CAD drawings, AVI, bit maps, screen captures and the often used Google Earth map. Just use the Print Screen key to capture any image and save it to Paint (print screen is a one page buffer that is overwritten each time you press the print screen key). In Paint, select edit, paste to show the image. Crop and Save it to a folder.

GUI: An acronym for Graphical User Interface. This is the visual display that the operator uses to use the system.

H.264: This video compression method is an improvement over earlier formats (JPEG, MPEG-4) providing smaller average usable file sizes. See M-JPEG, MPEG-4 and H.264.

HDCCTV: An acronym for High Definition Closed Circuit Television. This is an emerging new standard for sending video over standard RG-59 coax cable. One purpose of the standard is to take advantage of HD monitors and provide the clearest live picture possible. The standard requires modified hardware in cameras, DVRs and monitors. This is expected to be available early 2010. This sounds like a local live improvement but recording and sending the data through the Internet will require compression to be effective. We'll see the results when it is available at trade shows.

HDD: An acronym for Hard Disk Drive.

HDMI: Acronym for High Definition Multimedia Interface. This is a single cable connection used in consumer electronics providing a high level of clarity. This type of connection is beginning to show up in CCTV products.

Home Position: This refers to PTZ cameras. The camera will return to a preset position after a selected period of inactivity. The preset position is usually preset #1. This feature ensures that the dome returns to a known position after an operator has moved it from the home position.

HTTP: (Hyper Text Transfer Protocol): Used to transfer information from Web Servers to Web Browsers.

Hybrid: Hybrid refers to combinations of analog and IP video solutions. Originally this meant connecting analog cameras to video encoders for connection to an NVR. More recent Hybrid systems are a combination DVR/NVR allowing both analog (BNC) and Ethernet connected IP cameras.

ID: An acronym for Identification. Devices in a system typically have a unique ID number assigned to them.

IDE: Integrated Drive Electronics. This is the cable connection from a PC motherboard to a disk drive, CD drive or other devices. This is a forty pin ribbon connector cable. EIDE is an updated configuration 80 pin connections providing an individual ground for each data signal.

Infra Red Light: The wavelength of light produced below the visible part of the spectrum. Humans can't see this light but cameras can. IR cameras use Infra Red LEDs to light an area and provide usable (black and white) images in what appears to humans to be total darkness.

Instant Replay: This is a term used to describe a DVR's ability to playback recorded information within a few seconds of the original recording. Most DVR's record video in a buffer for a period of time before writing the information to the Disk Drive(s). The ability to retrieve video from the buffer before it is written to the drive allows an operator to review information immediately. This is very helpful in an attended system application where the operator is watching shoplifters in a store. The information is confirmed before the person leaves the store. Few DVRs do this well.

2:1 Interlace: The pattern described by two separate field scans when they join to form a complete video frame. As the video picture is transmitted, the first field picks up even-numbered scan lines - the second, odd-numbered ones. The two interleave together to form a single, complete frame.

Internal Sync: The internal generation of sync pulses in a camera using a crystal controlled oscillator. This is needed on non-mains powered cameras (any DC powered cameras).

Internet: This is the term for the interconnection of computers on the "world wide web." This is how you connect to your favorite websites and to remote DVRs.

IP: An acronym for Internet Protocol.

IP: The other IP. This one stands for Ingress Protection. It is a measure of the ability of an enclosure to resist dust and water. It is expressed (usually) as two numbers as in IP66. This rating would mean your outdoor dome enclosure is totally resistant to dust and water entry. Some of these claims are overstated (like air holes in the dome skin when it's rated as wind driven waterproof). "Google" IP rating system for details on the levels of protection and their ratings.

IP Address: This is the individual address of the computer. IP addresses are 32-bit binary numbers (all ones and zeros). This is fine for computers. Humans need an easier way to express the address. Each binary octet is expressed as a number between zero and 255. An example of an IP address is 192.168.001.001.

IP Cameras: These are IP based video cameras using IP networking as their basis rather than the traditional video signal used in broadcast and closed circuit systems.

IR: an acronym for Infra Red. IR remotes typically control video devices (TVs, DVRs, etc.).

IR Camera: Refers to cameras that have IR LEDs installed that turn on in low light providing a usable image in even total darkness. The effectiveness and distance varies widely based on the number of LEDs and overall quality of the camera.

IR Cut Filter: IR light can distort colors in CCD and CMOS cameras. An IR filter is often used in cameras to filter out IR light during bright daylight conditions. An IR cut filter is automatically removed at low light to allow the camera to take advantage of IR light in lower light conditions. The camera usually switches to black and white operation at this time since B/W works better than color in low light.

Iris: The mechanism that can be adjusted to vary the amount of light falling on the imaging device.

IR Remote: This is similar to remote controls used with a variety of electronic devices. In CCTV context the IR Remote controls the DVR including all functions of the menu and PTZ control.

ISDN: (Integrated Services Digital Network). ISDN telephone lines have a speed of 128Kbps (two 64K "B" channels). This type of connection is usually limited to businesses.

ISO: Acronym for International Organization for Standardization. This is the ISO in ISO9000.

ISP: This is an acronym for Internet Service Provider. ISPs provide your connection to the Internet.

JBOD: Acronym for Just a Bunch of Drives. This is typically similar in appearance to a RAID system. There is no redundant capability. You just keep filling the drives as one large storage capacity. JBOD can store as much as twice the capacity of RAID systems because of the redundant nature of RAID.

Jog Shuttle: This is a front panel knob sometimes installed on DVRs and VCRs. Moving the jog shuttle's inner and outer rings provide control for playback and menu navigation. The jog shuttle is usually in addition to traditional VCR style button controls.

JPEG: (Joint Photographic Experts Group): This is a video compression method for single images. It was originally developed to reduce video image file sizes for transfer through the Internet. See M-JPEG, MPEG-4 and H.264.

KLR: This is an acronym for Known Limitations Report. A KLR is often a requirement inside a manufacturing organization so that known problems are not forgotten in a newly designed product. This is a convenient list of what needs to be fixed in the next software release.

KVM Switch: This is a switching device that allows one operator to control multiple PCs (DVRs, NVRs, etc.) using a single monitor mouse and keyboard. KVM stands for Keyboard, Video and Mouse. Systems can range from two and four unit options up to hundreds of units.

LAN: An acronym for Local Area Network. This could be as small as a two computer system, or, it could incorporate hundreds of users in a campus environment. It is local in that there is a direct wire connection between all parts of the network.

LCD: Liquid Crystal Display. An LCD is a flat-screen slim profile video display.

LED: A LED is a Light Emitting Diode.

Legacy: This term refers to existing products in the field. Some disappear quickly and some hang on seemingly forever. Manufacturers typically use the term to identify previously sold and now discontinued products that they are still obligated to service and support.

Level of Service: This is the degree of effort applied to the manufacturer's service capability as measured in funding budget, number of service personnel, equipment, training etc.

Levels of Support: This refers to the individual levels of support functions in an organization. The terminology varies from company to company. The basic idea is this: Level #1 is the service tech at a customer site. Level #2 is whoever he calls for help. Level #3 is whoever Level #2 calls etc. Eventually the level reaches to the engineering development group.

Line locked: The sync pulses of cameras are locked to the AC mains frequency (50/60 Hz).

Line Powered Camera: A camera in which the power is supplied along the same coaxial cable that carries the video signal. This was once common before digital devices showed up in CCTV. The DC offset may destroy a DVR or MUX (multiplexer).

Linked alarms: Allow one alarm to trigger another. An example is an alarm on one camera may be configured to move another PTZ camera to a preset position.

Live Video: Live displays current activity. This can be at the camera location or at a remote site connected to the cameras through the Internet.

Loop Out: This term refers to the additional BNC connectors installed for the purpose connecting the incoming video to additional devices. You will see these installed on many CCTV products.

Luminance: Brightness. This is the black and white portion of the composite video signal. See Chrominance.

Matrix Switch: This is a very large device to manage large numbers of cameras, monitors and operator options. Don't think boxes, think rows of equipment racks. A large Matrix Switch system can handle up to 4,000+ cameras and a couple of hundred monitors. You'll find these installed in casinos, airports and hospitals. Miles of cable is installed to connect each camera to the Matrix Switch.

Megapixel: Megapixel refers to cameras with pixel content higher than NTSC/PAL formats. Current sizes of up to 10 megapixels are available. The size will continue to grow. If you want to estimate the megapixel size used in security video next year just check the pixel size of consumer point and shoot cameras today.

Megapixel Lens: Megapixel imagers have more pixels than standard imagers. A standard lens can't focus light fine enough to resolve to a single pixel in megapixel formats. Megapixel lens have additional optical elements that

allow light to focus on individual pixels. You will see the difference if you test the same camera with both lenses. The megapixel advantage can be lost with a less effective lens.

Menu: This is the generic term used to describe the setup screens in a variety of devices.

M-JPEG: Motion JPEG: This is a series of compressed JPEG images to produce a moving image. See M-JPEG, MPEG-4 and H.264.

Motion Alarms: Video motion alarms are triggered by recognizing changes in the video image. There is no physical connection causing the alarm condition.

MPEG-4: (Motion Picture Experts Group): This video compression method is an improvement over M-JPEG providing smaller average usable file sizes. See M-JPEG, MPEG-4 and H.264.

Multiplexer (Multiplexor): An electronic system that can accept a number of camera inputs and record them virtually simultaneously. They can also provide multi screen displays with four, nine, sixteen etc. cameras on the screen at once. Multiplexers can be used to transmit multiple pictures down a single video line whether it is a coaxial cable, microwave, infrared link etc. This requires a multiplexer at each end of the line.

Network Administrator: The human that is responsible for setup and ongoing support for a computer network. The network administrator must be involved in any discussions concerning video applications that would affect the network.

Network Bandwidth: This refers to the total amount of network traffic that is allowed on the network. A typical LAN connection is 100Mbps. All devices on that leg of the network share the available bandwidth. WAN traffic is much slower because of the slower connection to the outside world.

Network Camera: This refers to a network based camera. An IP camera can connect to an NVR. You can see the video with the NVR remote software. You can also connect directly to the network camera through a browser connection.

Network Switch: A hardware device used to connect multiple devices to a network. These devices usually have from four to 32 inputs. They can be connected together to make any size network.

N/O, N/C: Acronyms for Normally Open and Normally Closed. This refers alarm inputs/outputs and alarm devices. Most common alarm devices provide a contact closure to initiate the alarm. Some devices are normally an open circuit that closes a switch on alarm and others do the opposite. Most DVRs will accommodate either type with a menu selection.

Node: Any device connected to the network. It could be a workstation PC, a server, a printer, etc. This can be any device with its own IP address on the network (including DVRs and IP cameras).

Noise: Any unwanted signal that affects the video signal. This is usually random electrical energy or interference. In video, noise can produce a random salt and pepper pattern over the picture. Heavy video noise is called snow.

NTP: Acronym for Network Time Protocol: This network feature allows the time on PCs to be time synced with a server on the network. This assures that all network devices are systematically corrected to the same time at selected intervals.

NTSC: National Television Systems Committee of the Electronics Industries Association (EIA) which prepared the NTSC format specifications approved by the Federal Communications Commission, for US commercial color broadcasting. `NTSC' also refers to a color television format having 525 scan lines, a field frequency of 60 Hz, a

broadcast bandwidth of 4 MHz, line frequency of 15.75 KHz, frame frequency of 1/30 of a second, and a color subcarrier frequency of 3.58 MHz.

NVR: This is an acronym for Network Video Recorder. An NVR is a server hardware platform with proprietary video recording software installed. NVRs are designed to operate with IP cameras providing an all-digital configuration.

ODD: Acronym for Optical Disk Drive (CD/DVD).

ONVIF: Acronym for Open Network Video Interface Forum. This is a growing standard for IP camera interface.

Operating System: This is the program that controls the basic operations of a computer. Examples are Windows 7, Windows Vista, Windows XP, Linux, Apple, and UNIX.

Optical Zoom: This is the normal zoom capability of a variable focal lens. Example: A 5mm to 50mm zoom lens can be positioned any distance with no loss in video quality. By comparison, digital zoom enlarges the image but reduces the quality.

OSD: Acronym for On Screen Display.

OSI model: OSI (Open Systems Interconnection), are the rules for network communication that the TCP/IP protocol carries out.

Over scanning (Over-scan): This technique is used in consumer display products to extend the deflection of a CRT's electron beam beyond the physical boundaries of the screen to ensure that images will always fill the display area. See also under scanning.

Paint: This refers to that old Windows program for altering images. Paint and the Print Screen button can combine to save an image of anything on your PC screen. Can't remember that long code on an error message? Jus press print Screen, then start Paint and press Edit, Paste to import the screen shot into Paint. From there you can save it or email it to someone. This is a great way to capture images for E-maps (Geo Maps).

PAL: Phase Alternation Line; the European standard color television system, except for France. PAL's image format is 4:3, 625 lines, 50 Hz and 4 MHz video bandwidth with a total 8 MHz of video channel width.

Pan Tilt Zoom (PTZ): A device that can be remotely controlled to provide both vertical and horizontal movement for a camera, with zoom. This is a movable mechanical base for a camera.

Password/Passcode: This is the unique password to gain access to a device. Passcode is sometimes used when the input is numeric only.

Pattern: Refers to PTZ cameras. You can save a series of camera movements and then replay the pattern of movements. Just select the Pattern number from the PTZ GUI.

PC: An acronym for Personal Computer.

PC based DVR: This is a DVR that is based on a standard PC hardware platform. There may be several proprietary components installed but the unit is primarily a PC with some modifications as opposed to a unique proprietary design.

Peak to peak: The measurement of any signal from the lowest value to the highest. In a composite or full video signal, this should be 1 Volt.

Peer to Peer Network: This is a network where all users can share information equally. You share the information on each computer's drives with all the other computers in the workgroup. The workstations (each PC) communicate directly with each other.

PING: This is a DOS Command Prompt level instruction that allows you to test the hardware connection from one computer to another. The actual meaning of the acronym is unclear although Packet Internet Groper is often mentioned. This is a basic "tool" used to setup and troubleshoot network installations.

Pixel: Picture element. This is the smallest software addressable point on the image. The number of pixels in an image is measured horizontally first, then vertical (ex. 320x240).

Player Software: This is the generic term used to identify software used to review exported DVR video in a standard PC. The proprietary DVR video format requires this software to play the video in a PC and it is usually exported to the device along with the video. Some manufacturers require you to install the player on your PC. Others run directly from the device (thumb drive, DVD, etc.).

POE: Acronym for Power over Ethernet. This is a network device that provides power to a device using one of the CAT-5 cable twisted pairs. This is an installation advantage eliminating the need for a locally installed AC outlet.

POS: An acronym for Point Of Sale. This usually refers to cash register data.

Pre Alarm: In record on alarm only mode a DVR hard drive is not recording until an alarm is encountered. Some number of seconds or minutes prior to the alarm event can be recovered from a software buffer that is continuously overwriting itself. The video recovered from prior to the alarm is called Pre Alarm.

Post Alarm: In record on alarm only mode a DVR can be set to record for a specific amount of time when an alarm is encountered. This time period after the alarm is called Post Alarm.

Preset: A preset position is an image view selected on a PTZ camera. The desired image position is saved and later recalled by selecting the preset number.

Privacy Zones: This refers to the ability of a camera to mask parts of its normal viewing area to prevent the operator from viewing the protected areas. This can be in fixed cameras or in PTZ cameras. The intelligence for operating this feature can be included in a dome, a DVR or in a Matrix switch.

Private Networks: The term private network is pretty generic. Generally it means that the network is restricted to specific users. This could range from a separate grouping of computers connected locally, two LANs connected together through a phone connection, to a complex "Intranet" that is accessed through the Internet, yet only available to authorized users. The Intranet version is often referred to as a "Virtual Private Network." In the case of Digital Video Recorders and their remote software connections, we refer to a private network as a separate grouping of security devices that are not connected directly to the normal company business network. The advantage of this private network is that you have all the bandwidth available for a specific purpose and you will not affect other company business in the case of a failure.

Protocol: In CCTV context a protocol is the command set used to control one device from another. An example is that each manufacture develops their own code to send commands to PTZ domes. This is why you see so many options for camera control in DVRs. The protocol is the software element. The hardware element is RS-422, RS-485, etc.

Proprietary: In CCTV context proprietary indicates a non standard method of accomplishing something. This may be good or bad depending on the results. Some proprietary software solutions were developed by manufacturers before the current standards were implemented. Some are attempts to intentionally circumvent the ability to

work with other manufacturer's equipment. Most were just developed separately with no thought of how anyone else approached the same issue.

PSIM (Physical Security Information Management): This is a concept where all security systems are tied together (video, access control, fire and safety, etc.) to provide a cohesive picture of your security capability. Several manufactures claim that their equipment is PSIM capable. Detractors point out that the PSIM claim is limited to products in each manufactures product line and not tied to an open standard that will allow individual products to work together.

PTZ Dome: A fully contained PTZ mechanism and camera installed in the same dome housing.

QSG: Acronym for Quick Start Guide. A QSG is a short manual or pamphlet shipped with a product to assist the installer/operator in completing the initial installation.

Quad: The name given to a video device that displays four cameras on a single monitor. The quad hardware digitizes each of the four camera images and resizes them to fit in the quad format.

Quad screen: Display where 4 cameras are viewed on the same screen, each camera image occupying a quarter of the display area. Quad screens can be seen in devices with any number of camera inputs. The quad screen is just one of several multi-screen formats available.

RAID: RAID is an acronym for Redundant Array of Independent Drives. There are several different levels of RAID devices. The key is that if one of the drives fails, the information from that device is retained in the remaining drives. The different RAID levels range from storing all information in two separate locations, to using software gymnastics to share information on all drives so that any single drive failure will not allow any loss of data.

RCA Jack: This is a standard connection used for audio. These connections are typically used for audio in CCTV.

Real-time recording: There are several interpretations of this phrase. Most people refer to it as full motion video, just like TV (30ips in NTSC). Some call it real time even if the update rate is slower.

Record Duration: In CCTV context record duration refers to the amount of time that a DVR will record before writing over the database with newer information.

Resolution: Analog video resolution is based on viewing a test pattern and determining the "lines of resolution" number by how well you can differentiate a series of converging lines before the black and white lines fade to gray. This is very subjective and rarely accurate. This method depends on the other equipment used to be a higher quality than the tested device.

Resolution: Digital resolution is the same as the pixel count. Using the analog test pattern method the resolution number will always be smaller than the pixel count.

Resource Monitor: This is a handy tool available with Windows Vista. It allows you to see CPU usage, network traffic, disk activity and memory usage all on a single screen. This is very helpful in viewing network traffic to your PC. Right click on the lower task bar and select Task Manager from the popup menu. Resource Monitor is a select button on the Performance tab. (This is not available on XP.)

Road Show: The intent of road shows is to bring the products to the customers. The target audience is dealers who don't have the budget, the time to spare, or the inclination to travel somewhere far. The factory reps (usually about 20 across the US for many manufacturers) facilitate this effort. They provide a local venue. They invite local dealers, luring them with free food and about a two hour presentation of the latest products. This is an opportunity for the manufacturer to show new items and the reps get to mingle with their customers. This is a

marketing blitz. The invitees are a combination of known dealers invited by the reps and anyone in the area who had their card scanned at a trade show.

Router: This is the hardware device that provides a gateway to the Internet.

Scene illumination: The density of light falling on the area to be viewed. For best results the ratio of the lightest to the darkest areas should not be more than a factor of two.

Screen Formats: Viewing multiple cameras on a single monitor screen. Typical formats are full, 2x2, 3x3, 4x4 and any number of multiple screen divisions.

Screen splitter: A term usually used for a device that can combine the views from two cameras on a single screen. Normally the camera syncs need to be locked together.

SATA: Acronym for Serial Advanced Technology Attachment. This is the cable that connects a PC motherboard to a disk drive or optical drive. It is a thin round cable providing serial communication. This is a newer technology than traditional parallel connections (ribbon cables). So you must know what type of drive each DVR requires.

SDK: Acronym for Software Developer's Kit. This provides enough information for a third party to develop software that will interface with your device.

Search: In CCTV context search refers to methods used to find video in a recorded database. Typical search methods are by time/date, alarm list, smart search by video movement.

Search Engines: A search engine allows you to look up items on the Internet. Examples of search engines are Google, Yahoo and Bing.

SECAM: Sequential Couleur A Memoire (sequential color with memory), the French color TV system also adopted in Russia. The basis of operation is the sequential recording of primary colors in alternate lines. The image format is 4:3, 625 lines, 50 Hz and 6-MHz video bandwidth with a total 8 MHz of video channel width.

Server: In general a Server is an unattended PC providing programs and services to work stations. The workstations are the Clients. In CCTV context the server is the device with the cameras attached (DVR, NVR). A PC using remote software is the Client.

Siamese Cable: This is a dual cable combining RG-59 video cable and an 18 gauge wire suitable for providing 12VDC or 24VAC power. This design simplifies installation of cameras. There is no need for a locally installed AC outlet at the camera location. Power is usually provided from a power distribution box at the control end.

Signal to Noise Ratio (SNR): A measurement of the noise level in a signal expressed in dB (decibels). A higher Signal to Noise ratio provides a higher quality signal.

S.M.A.R.T.: Acronym for Self Monitoring Analysis and Reporting System. The intent is to warn against impending PC failures before they happen (drives, fans, temperature, etc.).

SMTP: Acronym for Simple Mail Transfer Protocol (refers to Internet mail).

Spot Monitor: This is a secondary monitor connected to a DVR, Multiplexer, etc. This is also called a Call Monitor. The video displayed is typically a single image. Some units provide multiple outputs.

Static IP Address: This is the name given to a manually entered IP address. In large networks IP addresses are usually automatically assigned by DHCP.

Subnet Mask: This is a 32 bit binary number used as part of IP addressing. Each octet is expressed as a number between zero and 255. The subnet mask numbers define the network number.

SVHS or Super VHS: A higher quality extension of the VHS home videotape format, featuring higher luminance and the ability to produce better copies.

S-Video: Type of video signal used in the SVHS videotape format. S-video transmits luminance and color portions separately, using multiple wires, thus avoiding the color encoding process and its inevitable loss of picture quality. This provides the video and sync signals on different wires.

SWOT: Acronym for Strengths, Weaknesses, Opportunities and Threats. This is an evaluation method that requires you to identify both the good and bad in a situation (product, idea, etc.) and with those in mind identify potential opportunities and potential threats.

T1: A T1 line is a grouping of 24 ISDN "B" channels. The channels could be used individually, or, combined into a bandwidth of 1.544Mbps (24 x 64K). T1 lines are typically used by business to provide high speed connections for WANs. **Fractional T1:** This is part of a T1 (using some of the channels). Price varies with the amount of the pipe you use.

T3: A T3 connection has a bandwidth of 44.73Mbps. This is a fiber optic connection and typically connects ISPs to the Internet and to each other. A NAP (Network Access Point) is where ISPs connect to each other to exchange information.

Task Manager: This is the Windows Task Manager program that allows you to view Applications, Processes, Performance, Networking and Users information. Right click on the lower Windows Task bar and select Task Manager from the popup menu. Task Manager can be very useful for checking CPU usage and network traffic in a video network.

TCP/IP: This is an acronym for Transmission Control Protocol/Internet Protocol. This is the most common protocol for communicating through the Internet.

Technical Support: This refers to the organization and individuals that provide after sale support for installation and repair of products and systems.

Telemetry: The system by which a signal is transmitted to a remote location in order to control CCTV equipment. Example: To control pan and tilt and zoom functions, switch on lights, move to preset positions etc. The controller at the operator position is the transmitter and there is a receiver at the remote (camera) location. The signal can be transmitted along a simple `twisted pair' cable or along the same coaxial cable that carries the video signal using UTC.

Text: Refers to any form of alpha-numeric input that is displayed or recorded.

Thermal Camera: Thermal cameras don't see light, they see heat. Providing a black and white image the camera can detect the body heat of an individual in the image. These are night vision cameras that can highlight an individual hiding in the bushes because of the heat difference. These are very expensive cameras with value for specific purposes.

Thumb Drive: A small USB memory device. Connect it to a USB port to import and export files. These devices are commonly used to export video from a DVR, upgrade firmware, etc. These are also called Flash Drives.

Thumbnail: Refers to a small individual camera image.

Time-lapse VCR: A type of video recorder that can be set to record continuously over long periods. This can be anything from two hours to 960 hours, achieved by the tape moving in steps and recording one image at a time. This means that if set to record over long periods much information is lost and only occasional images are recorded. On receipt of an alarm signal these machines can be automatically switched to real-time mode. Most DVRs mimic this same capability.

Total Zoom: Refers to camera zoom capability. This is the total of optical zoom and digital zoom. Example: Optical zoom 36X and digital zoom 12X = 432X total zoom.

Touch screen control: A system by which all the camera controls are displayed on the screen of a special monitor. To control any function simply requires the screen to be touched at the appropriate symbol which can be to select a camera or pan, tilt and zoom. The system is computer driven and can include maps, diagrams etc. that are automatically displayed according to the alarm received.

Tour: Refers to PTZ control: You can select a series of cameras, Presets and Patterns into a tour. This will switch from one camera, preset or pattern to another in the order and for the time selected. The result is a tour (the name is derived from a guard tour where the guard physically goes from location to location) of video from a central location.

UDP: (User Datagram Protocol): Transfers information between two applications. Usually used for messages or commands between applications. The data is not guaranteed accurate as with TCP.

Underscanning (Under Scan): A technique generally used by some TV and video systems as a way of ensuring that the complete image is always visible within a display area; the opposite of over scanning.

URL: Acronym for Universal Resource Locater. This is the link name you type in the browser command line (like www.abccompany.com).

USB: Acronym for Universal Serial Bus. This is standard PC hardware. It allows external devices to be easily connected to a PC, DVR, etc. Connected devices are typically hard drives, CD/DVDs and flash drives.

UTC: This is an acronym for Up-The-Coax. This refers to sending telemetry information (PTZ control data) to a PTZ device on the same coax cable that provides the video. The data is transferred during the Vertical Blanking Interval (that wide black line you might see on a rolling image) and does not interfere with the video display.

UTP: An acronym for Universal Twisted Pair. This refers to any twisted pair wire whether a single pair or four pair as in CAT-5 cable.

Varifocal Lens: This is a lens with a manually adjusted focal length. The field of view can be adjusted easily after the camera is installed. This simplifies installation with one lens type accommodating multiple locations.

VBI: Vertical Blanking Interval. This refers to the 32 blank lines between fields in the normal NTSC video signal. Many manufacturers embed information in this area of the signal.

VCR: An acronym for Video Cassette Recorder. (Aka: video recorder).

Vertical Market: Vertical markets are customers grouped by their market segment. Examples are casinos, airports, hospitals, retail stores, convenience stores, etc.

VGA: Vector Graphics Array. The standard computer monitor is a VGA.

Video Analytics: This is the generic term used to identify any number of software based video tools used to make determinations based on the changing video content of a camera. A few examples of video analytics are: Auto tracking, motion exception, missing/found object, people count, etc.

Video Clip: This is a (usually) short video saved from a database to document an issue. The video clip can be reviewed in a PC and maintained as a record of the incident. A video clip is often provided to the police to investigate an incident and/or used as evidence in a court case.

Video Loss: This term refers to cameras that were once an active part of the system (connected to a DVR) and the video signal has been lost. This provides an alarm to alert the operator to the video lost situation. This loss could be due to vandalism or to a component failure. Most likely it is due to a bad cable connection.

Video Motion Detection: A method of detecting movement in the view of the camera by the electronic analysis of the change in picture contrast.

VMS (Video Management System): This is the control software used to manage multiple DVR and NVR systems. The name may change from company to company. CMS (Control Management Software) and Enterprise Software are other common terms used for the software that manages multiple systems.

Wall Mount Power Supply: This is the name given to the external cubed shaped power supplies that plug into wall outlets and over populate power strips.

WAN: Acronym for Wide Area Network. A WAN is typically a number of individual LANs connected together through telecommunication links (ISDN, T1, DSL, etc.) either directly, or, through the Internet.

Watchdog: This is the name given to a diagnostic/recovery tool that is incorporated into many DVRs. Several "heart beat" signals are constantly monitored during normal operation of the unit. If a signal is no longer present the unit will automatically reboot in an attempt to restore normal operation.

WDR: Acronym for Wide Dynamic Range. This refers to cameras. This is a high end feature. A camera viewing an image with very bright and very dark sections will probably not show any detail in the dark areas as the camera is adjusted to tone down the bright areas. With WDR the camera view will be much improved showing detail in both light and dark areas. This feature also provides better image detail in low light conditions.

Website: It's hard to find a company without a website these days. It is even easy to generate your own website. With a company's URL all you have to do is type it in the command line of your browser and you can see all they have to offer.

White level: The brightest part of a video signal corresponding to approximately 1.0 Volt.

WINS: (Windows Internet Name Service): Matches Microsoft network computer names to IP numbers.

Wired Alarms: Alarms generated by physical devices connected to the alarm inputs of video devices. Typical devices provide a simple contact closure (connect the input to ground) to initiate the alarm action.

Wireless: This refers to any device that can operate without the need for installing wires. High priced wireless systems have become very reliable. The low priced variety (the ones that would sell in typical low end CCTV applications,) need improvement in the reliability area.

Y/C Video: Same as S-video. The video signal components (chrominance and luminance,) horizontal sync and vertical sync sent between devices on individual wires as compared to composite video where all the signals are sent on a single wire. The S-video advantage is higher video quality because it does not go through the combining and separating process needed with composite video.

By helping channel partners provide their customers with complete, affordable, best-in-class, large and small video surveillance solutions, Infinova helps integrators generate more business more profitably. Leveraging a manufacturing process certified to ISO 9001:2000 standards and over 250 engineers with a list of video industry firsts, Infinova channel partners provide their end-users with industry-acknowledged product reliability and technical leadership.

So that Infinova channel partners can create complete solutions, Infinova provides IP surveillance cameras and components, CCTV analog cameras, DVRs and components, camera accessories, monitors, power supplies and fiber optics communications devices. Infinova also has the technical ability and manufacturing flexibility to let integrators propose customized solutions. In addition, Infinova will partner with other manufacturers making other surveillance equipment and software to help its channel partners create turnkey solutions. Contrary to most other companies, Infinova will back-up their partners' products as well as its own to assure both the integrator and its customers that one call – to Infinova only – takes care of everything.

Infinova works diligently to assure its channel partners can provide cost-conscious solutions. With Infinova's hybrid systems, channel partners can propose systems that protect a customer's investment in its already-installed analog surveillance system but that also put them on a dynamic migration pathway to IP systems.

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With such customer focus, Infinova is often referred to as "the integrators' manufacturer."

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