

CENTER : DDU KAUSHAL KENDRA

NAME OF THE PROGRAMME :B.VOC (TROUBLESHOOTING AND MAINTENANCE OF ELECTRICAL AND ELECTRONIC EQUIPMENTS)

PROGRAM CODE : 3UABVOC(TMEEE)

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COURSE NAME : ELECTRONIC SECURITY SYSTEMS

SEMESTER : IV

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DESIGNATION : GUEST FACULTY

TOPIC : CCTV



CCTV (CLOSED CIRCUIT TELEVISION)

Closed-circuit television (CCTV) is the use of video cameras to transmit a signal to a specific place, on a limited set of monitors. It differs from broadcast television in that the signal is not openly transmitted, though it may employ point to point (P2P), point to multipoint, or mesh wireless links.

Why Use CCTV

- **CCTV should not be perceived as a magic wand for preventing crime** - it is just another crime prevention tool from a long list available to a business. There are many reasons why CCTV is the most cost effective security solution. In our experience we have found that most businesses suffer from the same few security problems.

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Industrial Safety	Premises Monitoring	Theft
Shop Lifting	Monitoring of high secured Zone	Worker Management
Staff Collusion	Monitoring of Public Areas	Staff Protection
Car Park Security	Deterrence	Etc

Why Use CCTV

- ❑ **Statistics point to major reductions in the amount of crime being committed where there are cameras installed. An article in 'New Scientist' magazine showed that simply installing a system can reduce crime, in the areas covered, by over 95%.**
- ❑ **Generally, once a Camera system is installed, it will only be fools who attempt to perpetrate offences within its field of view. These are often caught but for the majority it will provide a very high level of deterrence. A professionally installed camera system can reduce shoplifting by up to 90%.**
- ❑ **Most people considering the installation of a CCTV system have the main objective of trying to prevent crime**
- ❑ **A properly installed and managed CCTV system can dramatically reduce crime levels. Drops as high as 90% have been recorded where a highly visible CCTV system has been installed in certain locations, i.e. in shopping centers and car parks**
- ❑ **In small to medium-sized businesses, CCTV cameras acts as a deterrent. However, the initial cost and complexity of good quality systems have been barriers for many businesses. The cost of equipment has fallen steadily over the years. Today, good quality systems can be much cheaper and still provide exceptional operational simplicity**

Components of CCTV System

❑ Analog System

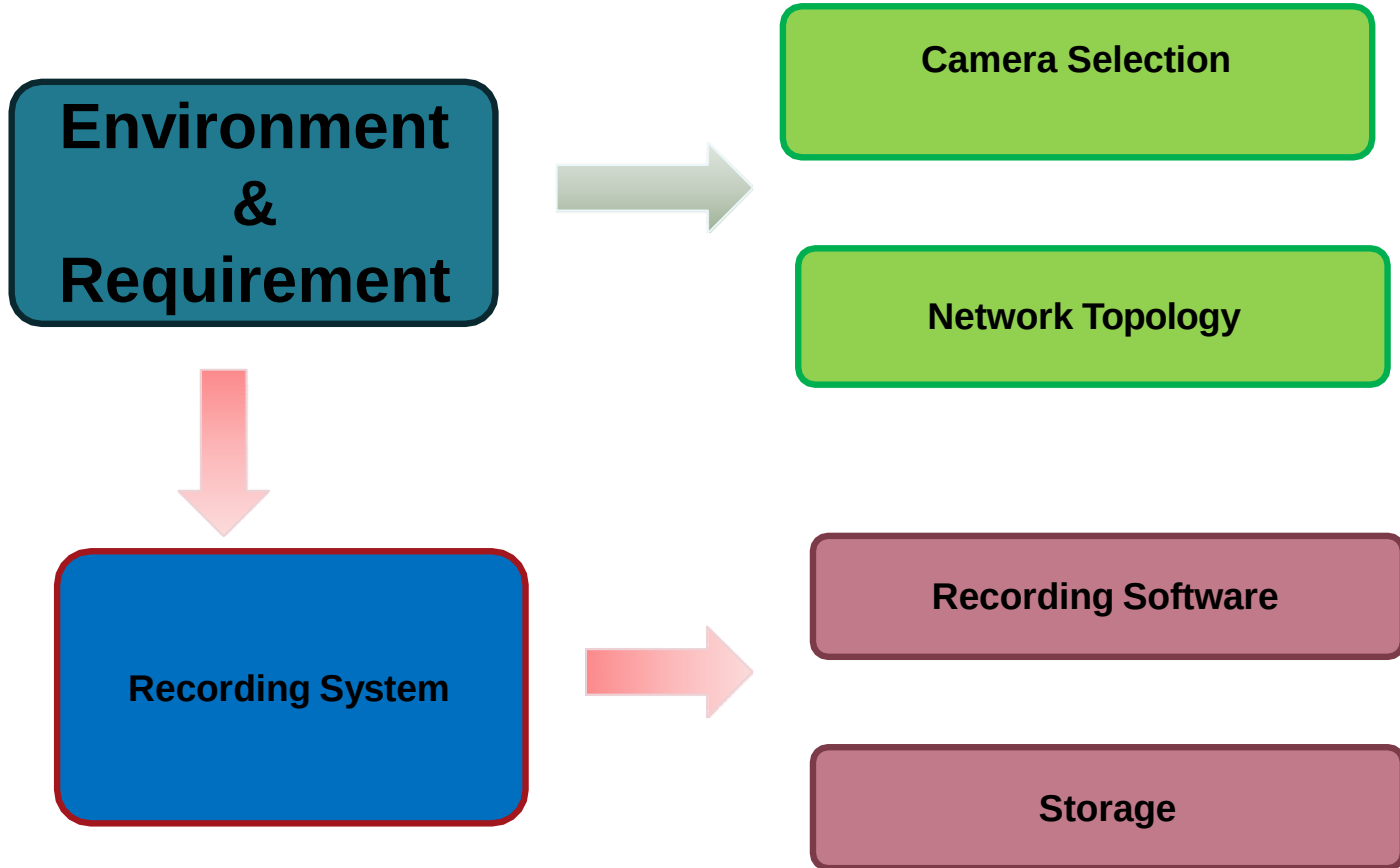
- ❑ Camera
- ❑ DVR
- ❑ Hard Disk for recording
- ❑ Wiring – for Video - Coaxial or CAT 5(with video balun)
- ❑ Wiring – for power (not required iv video balun is used)
- ❑ Power Supply
- ❑ Connector – BNC or RJ45 (in case of video balun)

Components of CCTV System

❑ IP System

- ❑ Camera
- ❑ NVR with video analytics
- ❑ Hard Disk raid enable.
- ❑ Wiring – for Video – CAT 5/CAT 5E / CAT6
- ❑ Wiring – for power
- ❑ Power Supply not required if POE switch used
- ❑ Switch / POE switch in case of POE used
- ❑ Connector – RJ45

System Consideration



Camera Selection

Outdoor
vs. Indoor

Day and
Night
Surveillance

Lens
Selection

Camera
Form
Factor

Video
Codec

Motion
detection

POE (only
for IP) /
Power
source

Wireless

Viewing

Outdoor

Indoor

Weather proof

Fan

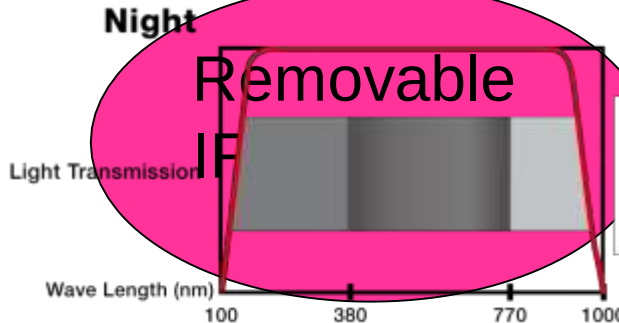
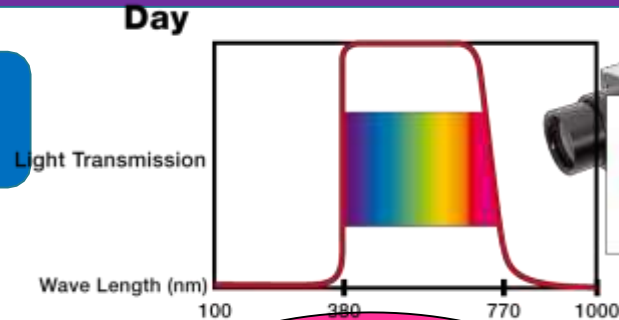
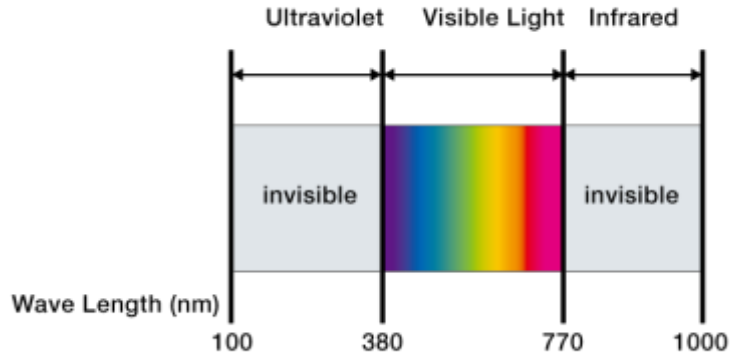


Enclosure + Indoor Camera

Camera Selection

Day and Night Surveillance?

Day & Night Camera



Removable
IF



Lens Selection

Lighting Condition

Out
lighti

Auto-



Without WDR



With WDR

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is

Video showing effect of WDR

