1. Simple CCTV System:

The simplest form of CCTV camera is connected directly to a monitor by a coaxial cable with the power for the camera provided from the monitor. This is known as line powered camera.

The next development was to integrate the outputs from four cameras into the monitor. The selection could be automatic or could be held selectively. Even microphone was even included in camera and speaker in monitor.

2. Main powered CCTV System:

Here the camera is also mains powered as monitor. The coaxial cable carries the video signal from the camera to the monitor. Although it is simple to install, but before installation must comply with the relevant regulations. If it is not done then problems with validity of insurance can take place.
When more than one camera is required in this system, video switchers can be used. Using this video switcher any camera can be selected to be held on the screen or a sequence can be set in turn through all the cameras.

3. Systems with Video Recording:

The next development of the basic system was to add the video recorder. With the arrangement shown in figure, the pictures that will be shown during play back will be according to the way the switcher was set up when recording. This means, if the set of sequence was set then the same views will be displayed on the monitor.
4. Movable Cameras:

So far all the cameras were fixed with fixed focal length lenses. In many applications the area to be covered would need many fixed cameras. The solution to this is to use cameras fixed to a movable platform. This platform can then be controlled from a remote location. The platform may simply rotate in a horizontal plane and is generally known as a scanner. Alternatively the platform may be controllable in both horizontal and vertical planes and is generally known as a pan, tilt unit.

APPLICATIONS

- Security: observation of car parks, hotel lobbies, building halls, buildings, public places etc.
- Industry: observation of stock, car parks, warehouse, receptions etc.
- Data Center: observation of network equipment, access control for staff etc.
- Private Property: observation of houses, yachts, garages etc.
- Tourism: ski resorts, hotels, holiday resorts, monuments, city centers, zoos, theme parks, etc.
- Events: concerts, sports events etc.
- Public Information: live weather conditions, exhibitions, road traffic levels etc.
- View Process: while working from home or at desk in the office, it can save both time and money. A network camera or video server over viewing a particular process allows video images to be transmitted and made available to several users over a local network.
- Monitoring: of construction work, production line, industry process, nursery, child care, queues at cashier in local super market.

Source: http://www.udaipurtalents.com/technical-learning/cctv-closed-circuit-television