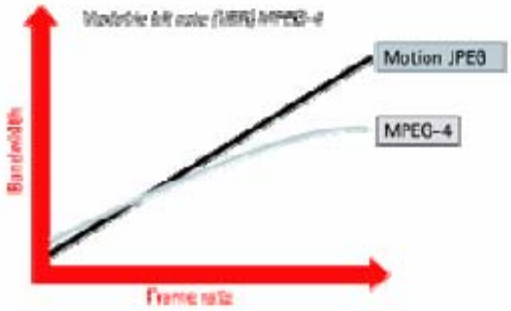
H.264 is Mpeg4 (Part 10) codec that provides high compression, high quality video, suited for surveillance application. It makes use of block transfers and motion compensated predictive coding. When compared with Mpeg2 coding, Mpeg4 (H.264) uses 1/3 of the bandwidth (1/3 of storage space) to deliver the same quality video. When compared with Mpeg(ASP), Mpeg (H.264) uses 3/5 of the bandwidth (3/5 of storage space) to deliver the same quality video.



The graph at right shows how bandwidth use between Motion JPEG and MPEG-4 compares at a given image scene with motion. It is clear that at lower frame rates, MPEG-4 compression cannot make use of similarities between neighboring frames to a high degree, and due to the overhead generated by the MPEG-4 streaming format, the bandwidth consumption is similar to Motion JPEG. At higher frame rates, MPEG-4 requires much less bandwidth than Motion JPEG.

Motion JPEG vs. MPEG-4
For most applications, Motion JPEG is a natural choice, balancing the needs for low bit rate and reasonably video quality. MPEG-4 has the advantage of saving disk space and transmission bandwidth but raises the demands on the viewing station. In a pure storing or viewing application, MPEG-4 will be the preferred choice.
The two main standards offered are Motion JPEG and MPEG-4, while MPEG-2 (which provides DVD-quality video) is offered in select products. MPEG-4 is ideal for applications where available bandwidth is restricted and higher frame rates are required.

.
Bandwidth(Very important)
Apart from the image resolution and compression, the bandwidth depends on the MPEG-4 settings, the image complexity, the amount of motion in the monitored scene.

When bandwidth needs to be controlled, constant bit rate can be used. The user can then give priority to either the frame rate or the image quality when there is increased motion.
Another way to control and reduce bandwidth consumption is to fix the frame rate.

Motion JPEG vs. MPEG-4
For most applications, Motion JPEG is a natural choice, balancing the needs for low bit rate and reasonably

video quality. MPEG-4 has the advantage of saving disk space and transmission bandwidth but raises the demands on the viewing station. In a pure storing or viewing application, MPEG-4 will be the preferred choice.
The two main standards offered are Motion JPEG and MPEG-4, while MPEG-2 (which provides DVDquality
video) is offered in select products. MPEG-4 is ideal for applications where available bandwidth is restricted and higher frame rates are required.
.
Network infrastructure:
Video streaming - Unicast
MPEG-4 Unicast controlled by RTSP (Real Time Streaming
Protocol). The method to use depends on the requirements of the application. RTSP provides better streaming control than MPEG-4 over HTTP.
Three following alternatives:
1. Unicast RTP (Real-time Transfer Protocol). The most effective method and the one with the lowest latency.
2. RTP over RTSP. This is RTP tunneled over RTSP, which can be used to exploit the fact that it is relatively simple to configure firewalls to allow RTSP traffic.
3. RTP over RTSP over HTTP. Tunneling via HTTP can be used to pass a firewall located between the camera/video server and the client.
Video streaming - Multicast
Multicast RTP has the advantage of reducing the bandwidth required for multiple clients viewing the same video stream. The disadvantage is that it will not work in large networks or over the Internet, as most network routers routinely disable multicast traffic.
Compatibility
MPEG-4 may be configured for use with other decoders such as QuickTime™. The Video object type can be set to either Advanced Simple or Simple (H.263 compression), or by enabling or disabling ISMA (Internet Streaming Media Alliance) compliance.

How to purchase DVR I need?
It depends on your different requirements, such as:
Security Record: To fulfill this requirement, DVR host with more channels will be suitable so that its functions of real-time monitor and retrieval will be powerful.
Remote Monitor: To fulfill this requirement, try to buy DVR host with powerful transmission functions. It should be better if the DVR host support several types of remote monitor, such as customer end, IE and etc.
Security & Defense: To choose DVR hosts support sensors input. It should be better if the DVR hosts support multiple linkage alarms.
Centralized monitor: To fulfill this requirement, DVR hosts must support monitor center, such as alarm log report and motion detecting area.
Mpeg4 H.264 video compression DVR will be ideal choice for your security need
Economical system:
(1). Install low frame rate, low cost 25fps PCI capture card into your existing computer which can be able to do recording and playback simultaneously. Refer to **HOME page item (3)**.
(2). Without PC knowledge can use Standalone Digital Video Recorder (Mjpeg video compression) at the function as same as the conventional type of video tape recorder. Refer to **Standalone DVR page with or without network funtion**.
*Spare Personal Computer with 17” monitor will be ideal for system 1;
Monitoring with spare TV set will be ideal for system 2.*