

# Les formats audio vidéo numériques

## Image fixe

.JPG

the International Organization for Standardization (ISO)

(JPEG)

Moving Picture Experts Group (MPEG)

## Audio

.WAV

.AIF

.MP3



Advanced Audio Coding (AAC) is at the core of the [MPEG-4](#), [3GPP](#), and [3GPP2](#) specifications and is the new audio codec of choice for Internet. Aussi appelé MPEG-2 NBC (Non-Backward Compatible).

AAC compressed audio at 128 kbps (stereo) has been judged by expert listeners to be "indistinguishable" from the original uncompressed audio source.\*

AAC compressed audio at 96 kbps generally exceeded the quality of MP3 compressed audio at 128 kbps. AAC at 128 kbps provides significantly superior performance than does MP3 at 128 kbps.\*

AAC was the only Internet audio codec evaluated in the range "Excellent" at 64 kbps for all of the audio items tested in EBU listening tests.\*

How does MPEG-2 AAC work ?

AAC uses the coding tools already present in MP3, but uses them in a better way:

This first part is mainly a removal of MP3 limitations, as AAC standard doesn't have to preserve compatibility. AAC also introduces some new tools over previous coding schemes:

Temporal Noise Shaping (TNS) is a tool designed to control the location, in time, of the quantization noise by transmission of filtering coefficients

Prediction is a tool designed to enhance compressibility of stationary signals

## MPEG-4 AAC

The MPEG-4 standard adds some new tools in AAC, in order to improve coding quality at low bitrates:

Perceptual Noise Substitution (PNS) allows to replace coding of noise-like parts of the signal by some noise generated on the decoder side

Long Term Prediction (LTP) is once again a prediction tool. This one requires less computation power than the one used in MPEG-2 AAC, while providing comparable coding performance

## Télévision HD (HDTV)

Mpeg4 Studio profile

1920x1080 en 4 :4 :4@440 Mbps

## Télévision SD (SDTV)

MPEG-2

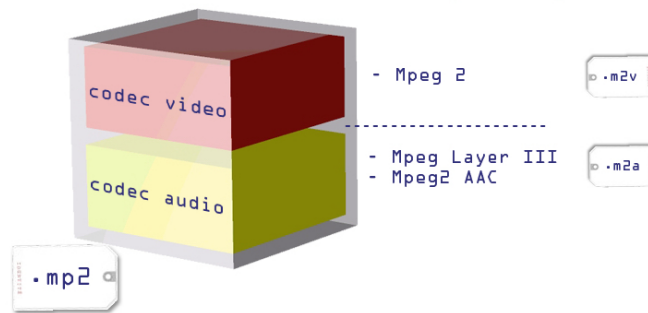
Approved November 1994

DVD-quality

Enabled Digital TV set-top boxes

Enabled Digital Versatile Disk (DVD)

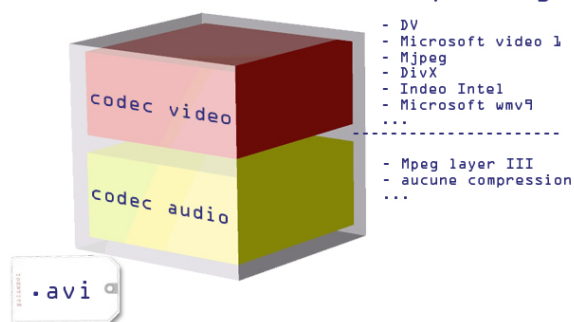
## Container MPEG2: Multiplexage A/V



## Multimédia et CD Rom

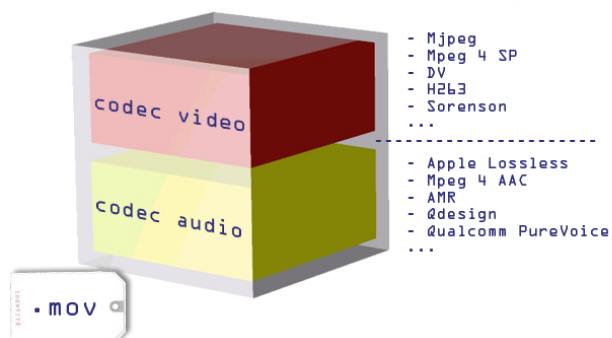
### AVI

## Container AVI: Multiplexage A/V



### MOV

## Container Quicktime: Multiplexage A/V



### MPEG-1

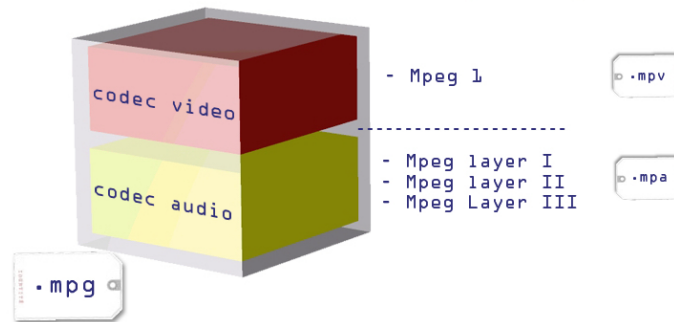
Approved November 1991

VHS-quality

Enabled Video CD

Enabled CD- ROM

## Container MPEG1: Multiplexage A/V



## Streaming

### MPEG-4

Approved October 1998

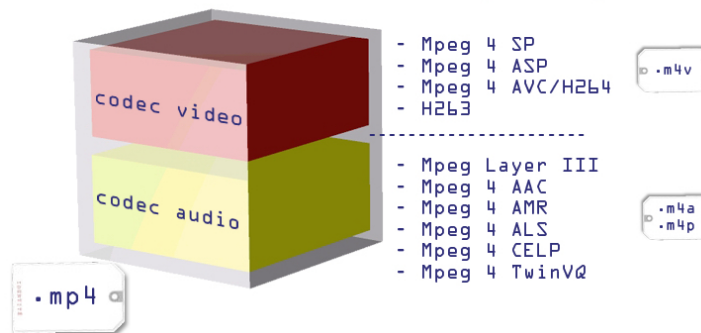
Scalable quality

Based on QuickTime File Format

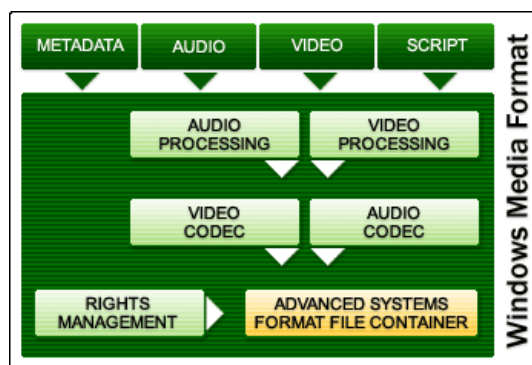
Scalable delivery - from cell phones to satellite television.

H.264/AVC (Advanced Video Coding), also known as MPEG-4 Part 10

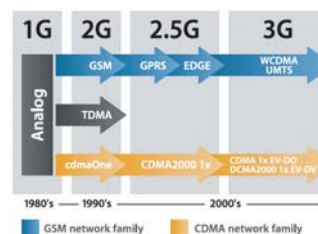
## Container MPEG4: Multiplexage A/V



## windows media video



## Pocket et Téléphones portables



	Format 3GPP	Format 3GPP2
Type de réseau :	GSM	CDMA2000
Codecs Video	MPEG-4, H.263	MPEG-4, H.263
Codecs Audio	AAC, AMR	AAC, AMR, QCELP
Text	3G Text	3G Text
Format du fichier	QuickTime	QuickTime
Extension du fichier	.3gp	.3g2