

# TOO MANY QUICKTIMES!

(and other related confusion):

thoughts from an emerging audiovisual archivist

---

Becca Bender

Digital Preservation | CINE-GT 1807

December 12, 2017

Or How I Learned To Stop Worrying  
And Just Give This Presentation

QuickTime is a complete multimedia architecture, not just a media player. It supports creating, producing, and delivering a broad variety of media.

–2005 QuickTime Developer Guide

Codec(s) (aka QuickTime)

Player(s) (aka QuickTime)

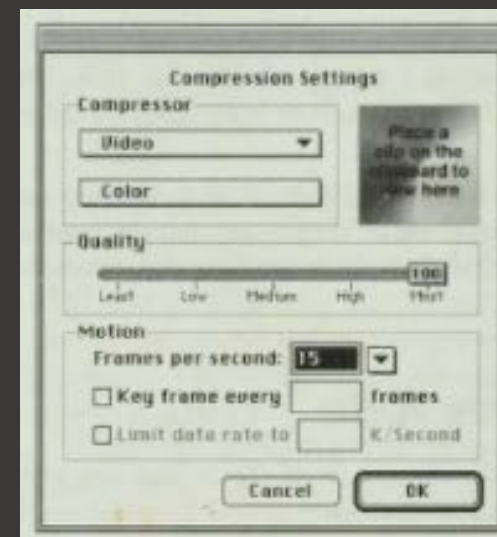
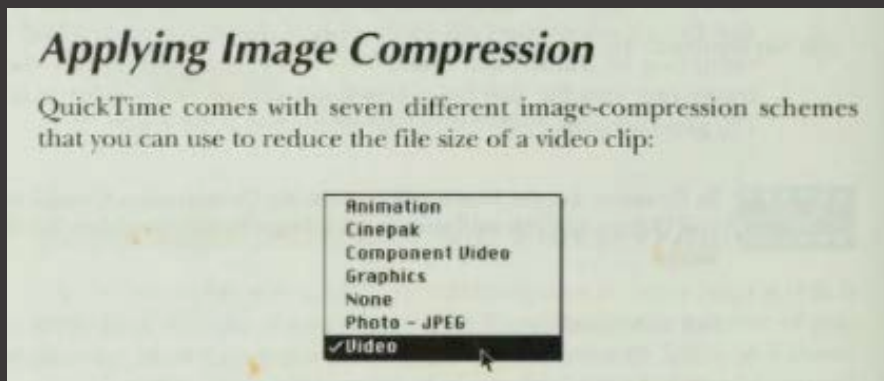
Container(s) (aka QuickTime)

# THE EASY PART: Codec(s) (aka QuickTime)

---

“The codec is also known as **QuickTime Video**, by its FourCC **RPZA** and the name **Road Pizza**.” –Wikipedia

- Apple Video codec introduced with QuickTime Player 1.0 in 1991
- Other “QuickTime” Codecs:
  - Animation
  - Cinepak
  - Component Video
  - Graphics
  - None
  - Photo - JPEG
  - **Video**



“Back in the 90s, people didn’t define containers and encodings as being separate from each other, **so for Apple, they referred to both the container and the encoding as QuickTime**, when really the codec was Road Pizza.” –Dave Rice

# THE EASY PART: Codec(s) (aka QuickTime)

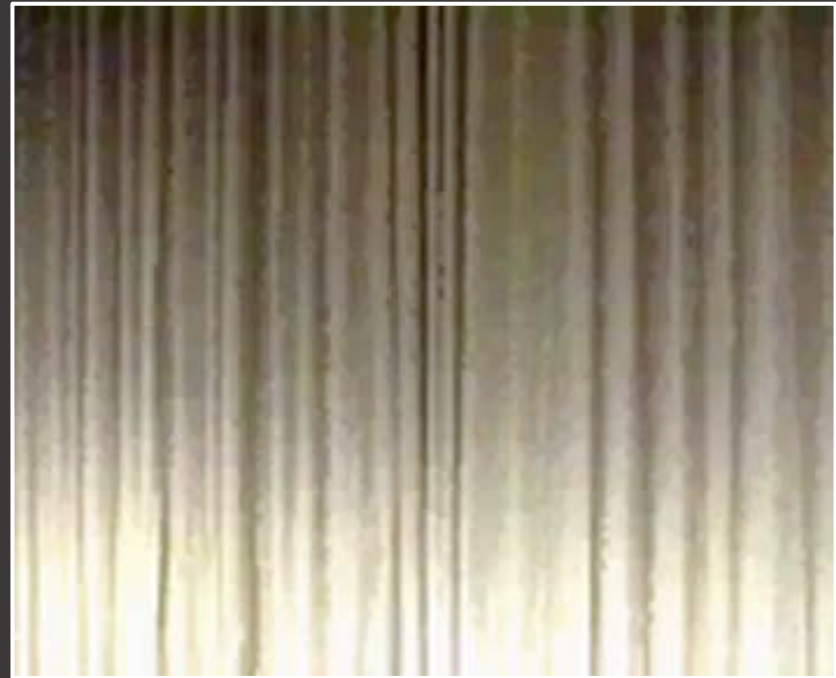
▼ General	
Complete name	/Users/bemblemman/Google Drive/02 Digital Preservation/Assignments/02 Final Project/QT Sample Files/RPZA/rpza2.mov
Format	QuickTime
Format/Info	Original Apple specifications
File size	1.98 MiB
Duration	9s 715ms
Overall bit rate	1 712 Kbps
Encoded date	UTC 2000-07-23 09:33:23
Tagged date	UTC 2000-07-23 09:33:45
Writing library	Apple QuickTime
▼ Video	
ID	1
Format	Road Pizza
Codec ID	rpza
Duration	9s 715ms
Source duration	9s 733ms
Bit rate	1 707 Kbps

▼ General	
Complete name	/Users/bemblemman/Google Drive/02 Digital Preservation/Assignments/02 Final Project/QT Sample Files/RPZA/jumping.avi
Format	AVI
Format/Info	Audio Video Interleave
File size	3.12 MiB
Duration	13s 733ms
Overall bit rate	1 907 Kbps
▼ Video	
ID	0
Format	azpr
Codec ID	azpr
Duration	13s 733ms
Bit rate	1 858 Kbps
Width	320 pixels
Height	240 pixels
Display aspect ratio	4:3
Frame rate	15.000 fps

# THE ANNOYING PART: Player(s) (aka QuickTime)

---

- QuickTime 1.x – released in 1991
- QuickTime 2.x – released in 1994
- QuickTime 3.x – released in 1998
- QuickTime 4.x – released in 1999
- QuickTime 5.x – released in 2001
- QuickTime 6.x – released in 2002
  
- QuickTime 7 (Pro) – released in 2005
  
- QuickTime X – released in 2009



# THE ANNOYING PART: Player(s) (aka QuickTime)

---

QuickTime 7 (Pro) vs QuickTime X

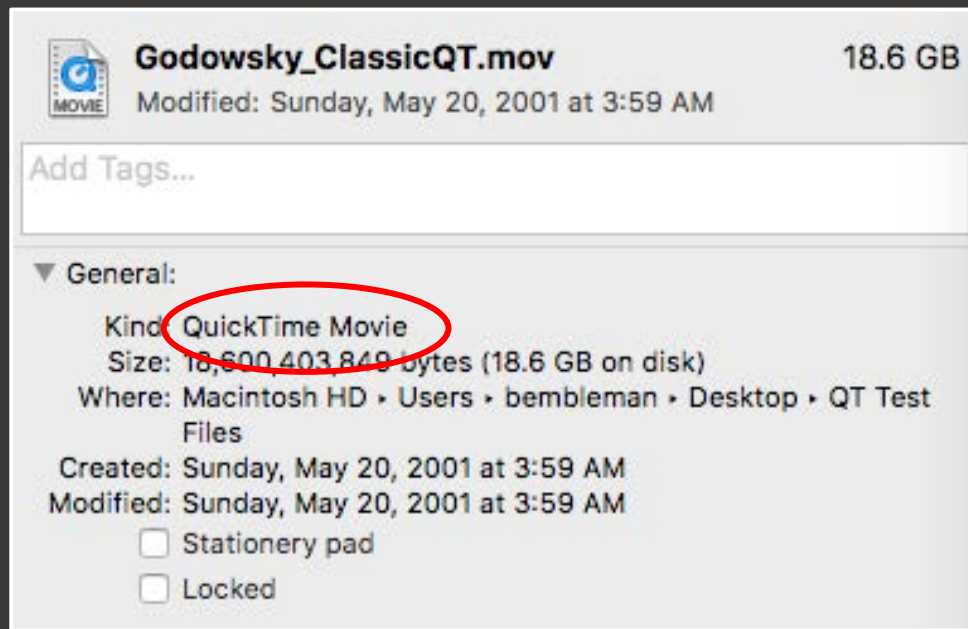


- Frame Number –
- Boundaries –
- Audio in 2x speed –
- Ease of trimming –
- Ability to play older files –
- [Windows Support](#) –



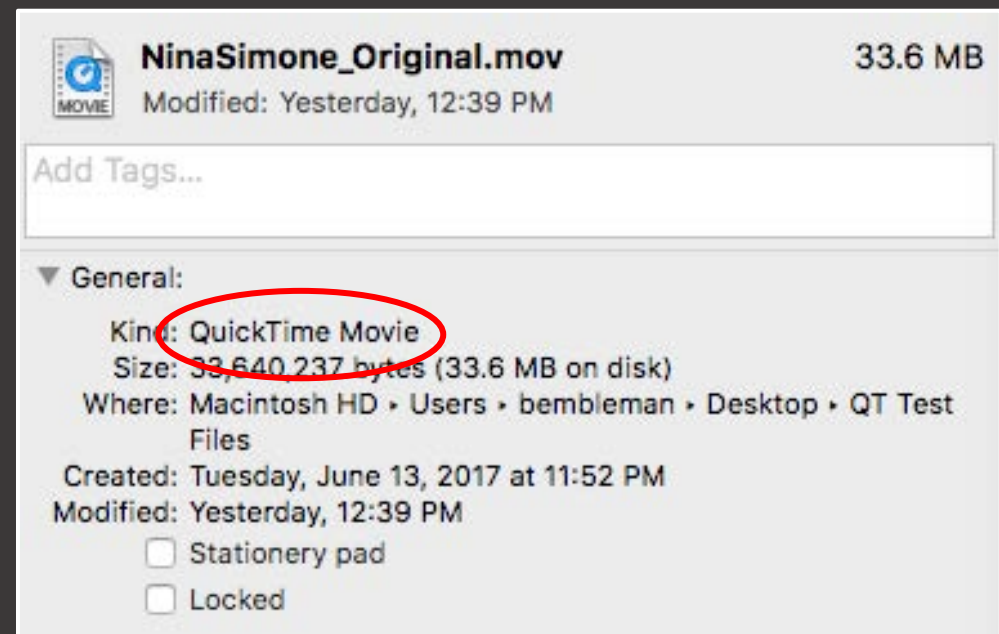
# THE WICKED HARD PART: Container(s) (aka QuickTime)

Classic QuickTime File Format **vs** Current QuickTime File Format  
aka **QuickTime** vs **QuickTime**



“CLASSIC”

(but I unintentionally made this file last month)



“CURRENT”

(as of 2005)



# THE WICKED HARD PART: Container(s) (aka QuickTime)

Classic QuickTime File Format vs Current QuickTime File Format  
aka QuickTime vs QuickTime

```
General
Complete name      : /Users/bembleman/Desktop/QT
Test Files/Godowsky_ClassicQT.mov
Format             : QuickTime
Format/Info        : Original Apple specifications
File size          : 17.3 GiB
Duration           : 56mn 7s
Overall bit rate mode : Variable
Overall bit rate   : 44.2 Mbps
Encoded date       : UTC 2001-05-20 07:59:05
Tagged date        : UTC 2001-05-20 07:59:05
Writing library    : Apple QuickTime|
```

CLASSIC

```
General
Complete name      : /Users/bembleman/Desktop/QT
Test Files/NinaSimone_Original.mov
Format             : MPEG-4
Format profile     : QuickTime
Codec ID           : qt 2005.03 (qt )
File size          : 32.1 MiB
Duration           : 30s 950ms
Overall bit rate   : 8 695 Kbps
Encoded date       : UTC 2017-06-14 03:52:59
Tagged date        : UTC 2017-12-10 17:39:56
Writing library    : Apple QuickTime 7.7.3
```

CURRENT

(qt )

# THE WICKED HARD PART: Container(s) (aka QuickTime)

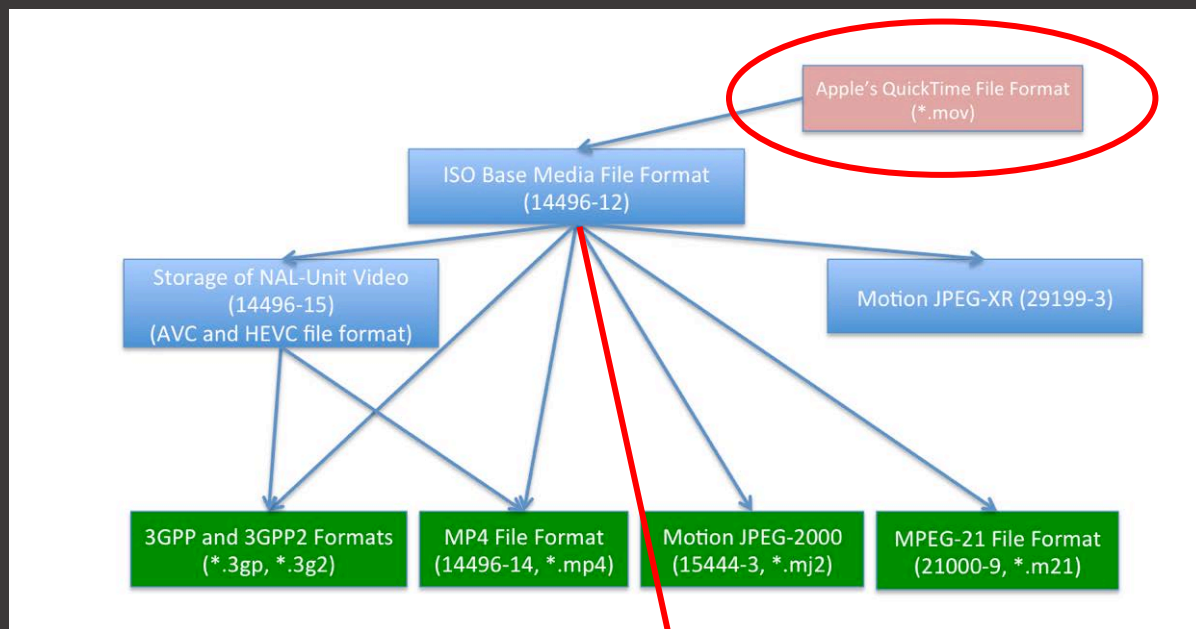
---

## The MPEG-4 Standard ISO 14496 – *Coding of audio-visual objects*

- Overall standard introduced in 1998
- Built on QuickTime File Format (Classic)
- Currently consists of 33 parts
  - Part 1: MPEG-4 File Format Version 1 (mp4) – public release 1999
  - Part 12: ISO Base Media File Format – public release 2004
  - Part 14: MPEG-4 File Format Version 2 (mp4) – public release 2003

# THE WICKED HARD PART: Container(s) (aka QuickTime)

## MPEG-4: Part 12 – ISO base media file format



QuickTime File Format  
(current \*.mov)

## MPEG-4:12 (IBMFF) / QuickTime Profile

```
General
Complete name      : /Users/bemblemann/Desktop/QT Test
Files/NinaSimone_ExportToQuicktimeMovie.mov
Format             : MPEG-4 Part 12
Format profile     : QuickTime
Codec ID           : qt 2005.03 (qt )
File size          : 9.82 MiB
Duration           : 30s 950ms
Overall bit rate   : 2 661 Kbps
Encoded date       : UTC 2017-12-10 17:40:42
Tagged date        : UTC 2017-12-10 17:40:42
Writing library    : Apple QuickTime
```

## MPEG-4:12 (IBMFF) / MPEG-4:14 (mp42)

```
General
Complete name      : /Users/bemblemann/Desktop/QT Test
Files/NinaSimone_ToMPEG-4.mp4
Format             : MPEG-4 Part 12
Format profile     : Base Media / Version 2
Codec ID           : mp42 (mp42/mp41)
File size          : 1.33 MiB
Duration           : 30s 950ms
Overall bit rate   : 362 Kbps
Encoded date       : UTC 2017-12-10 17:44:40
Tagged date        : UTC 2017-12-10 17:44:40
```

# Implications for **PRESERVATION**:

---

“If I was talking to a programmer, I would refer to the file as ISO Base Media File Format, but if I was talking to someone at AMIA, I would just say QuickTime.”

–Dave Rice