

Born to Be Wild



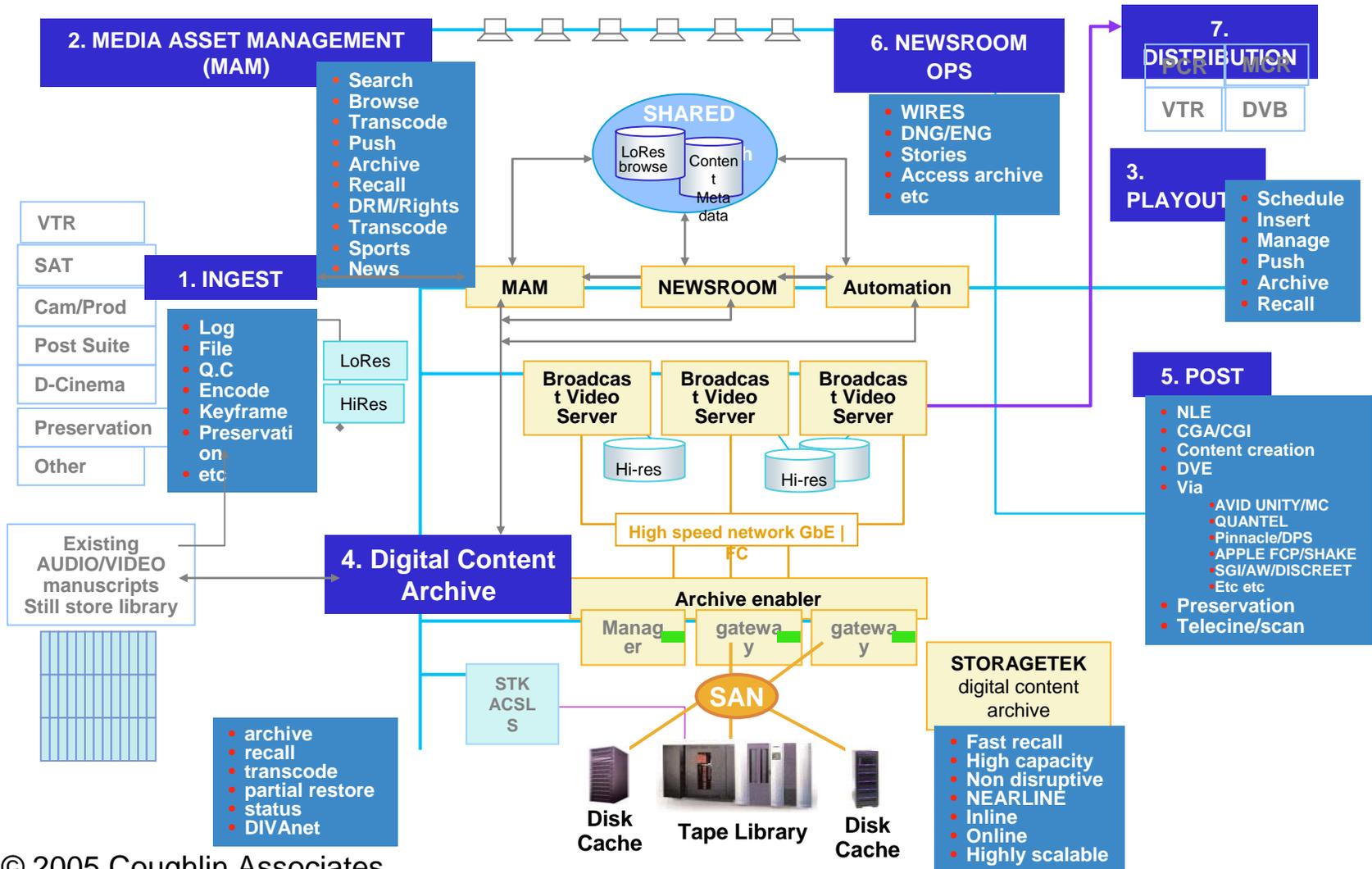
Keeping Entertainment Storage
in its Place

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Digital Content Workflow

From StorageTek, 2004



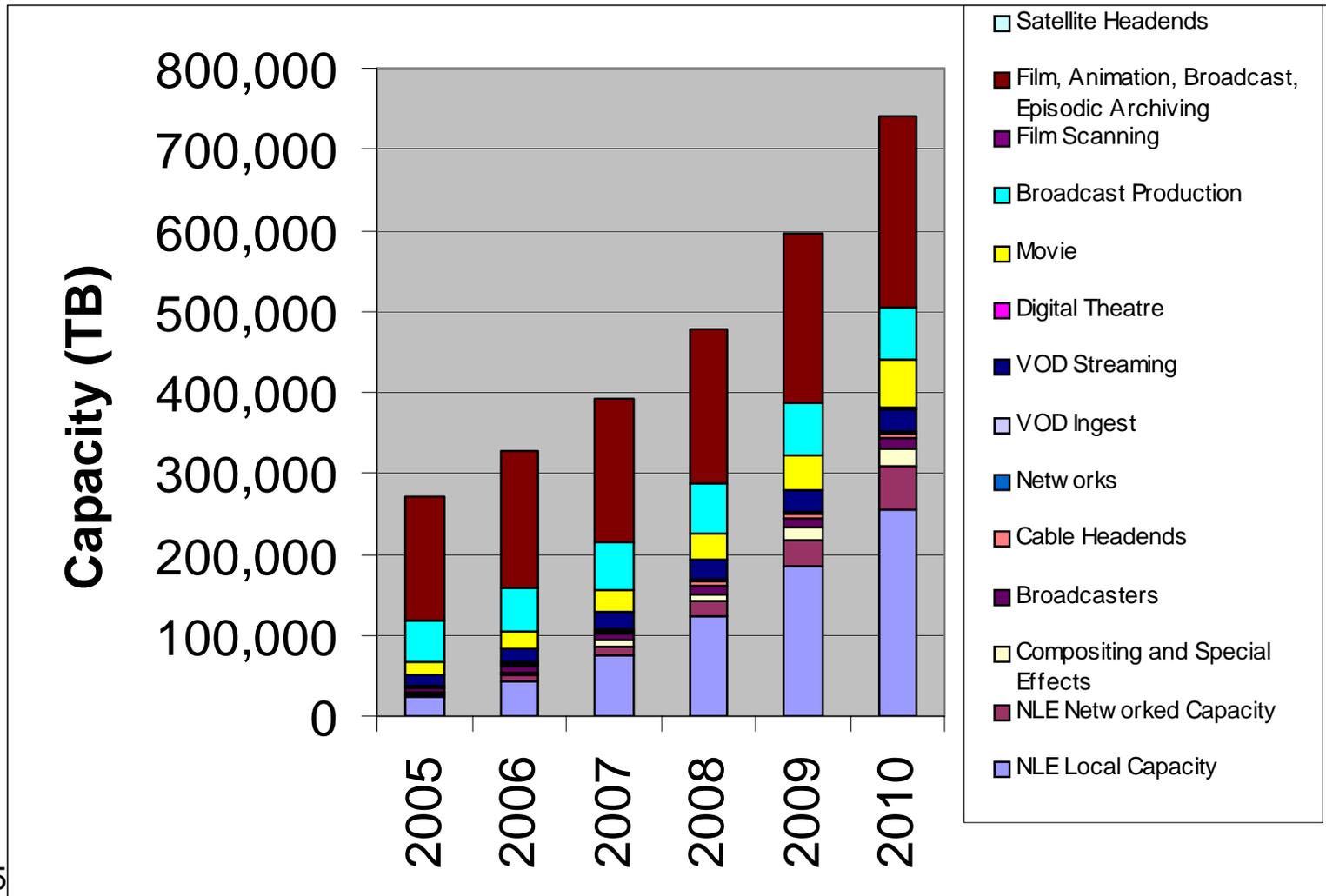
Entertainment Storage Categories

- **Vertical Markets**
 - Advertising and Corporate Content Creation (Work for Hire)
 - Broadcast Production (Network and Local TV)
 - Feature Film and Episodic Production
- **Content Creation and Acquisition**
 - Camcorders
 - Animation
 - Film Scanning
- **Commercial Post Production (Advertisement and Corporate Content Creation)**
- **Content Editing**
 - Non-Linear Editing (NLE)
 - Special Effects
- **Archiving**
 - Archiving New Content (from tape and other sources)
 - Digital Conversion of Older Analog Content
 - Migration of Content to Avoid Format Obsolescence
- **Distribution**
 - Broadcast
 - Cable
 - Satellite
 - Theatrical
 - Internet/Download
 - Physical Distribution (DVD, CD, Tape, etc.)

Feature Film Metrics

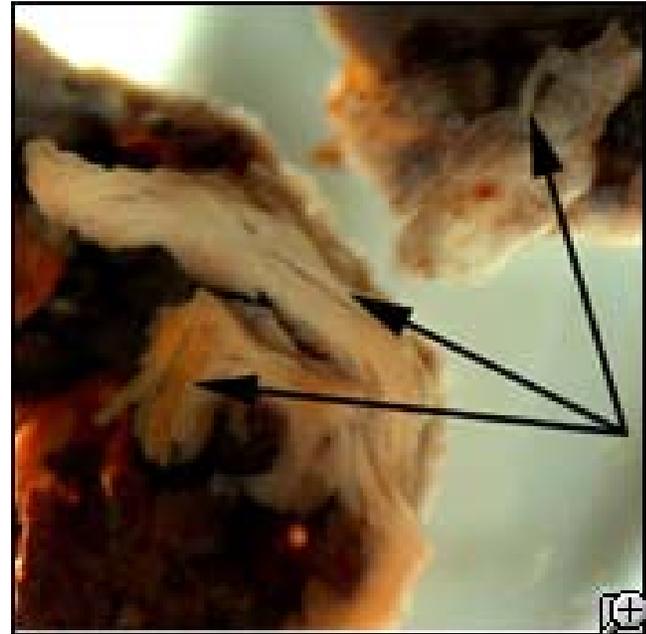
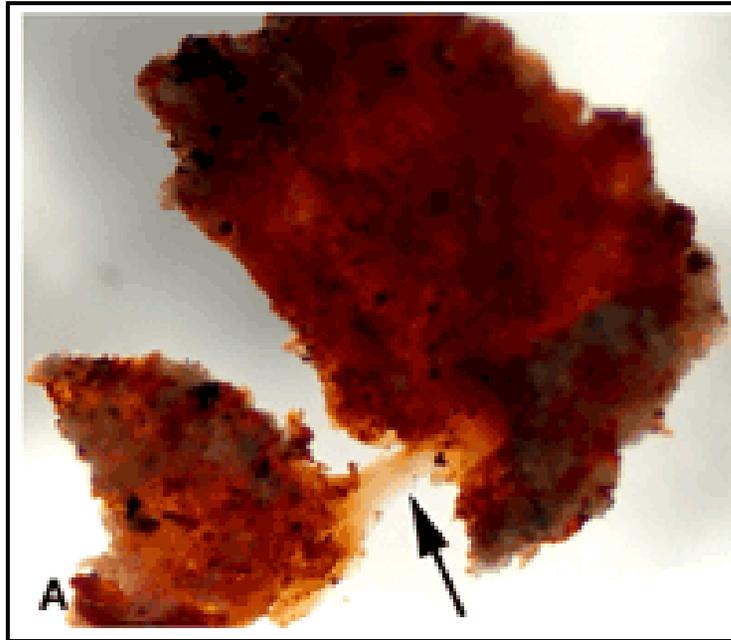
	2K Resolution	4K Resolution
Avg. Size of Single Frame (1 sec = 24 frames)	13 MB	50 MB
Avg. Storage Size of Finished Film	2 TB	8 TB
Data Generated During Production	10-400 TB	400-1,600 TB
Typical BW for Real-Time Film Playback	300 MBps	1,200 MBps

Capacity Growth Projections w/o Digital Preservation



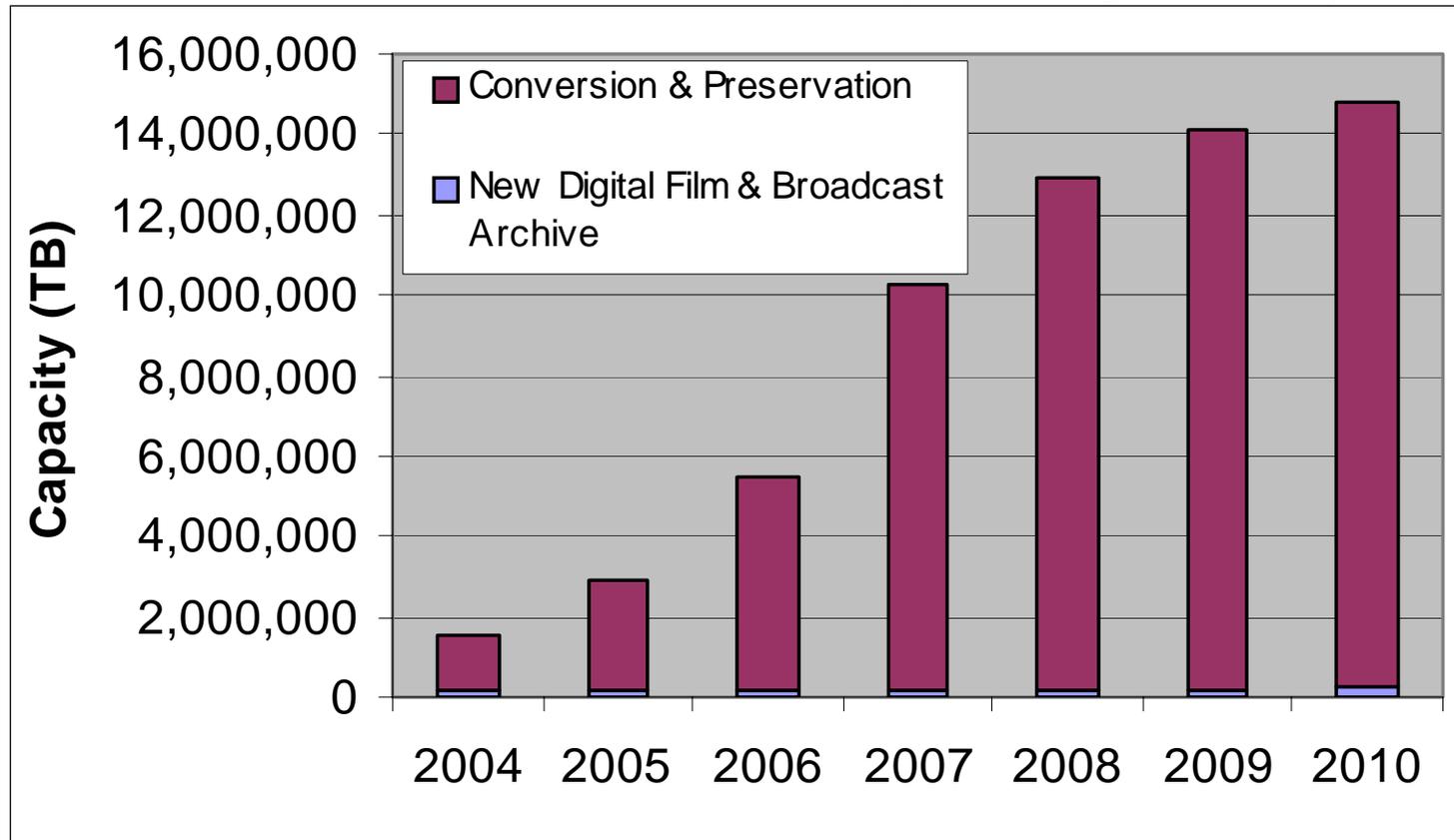
Preservation

(70 M Year Old T. Rex Soft Tissue)



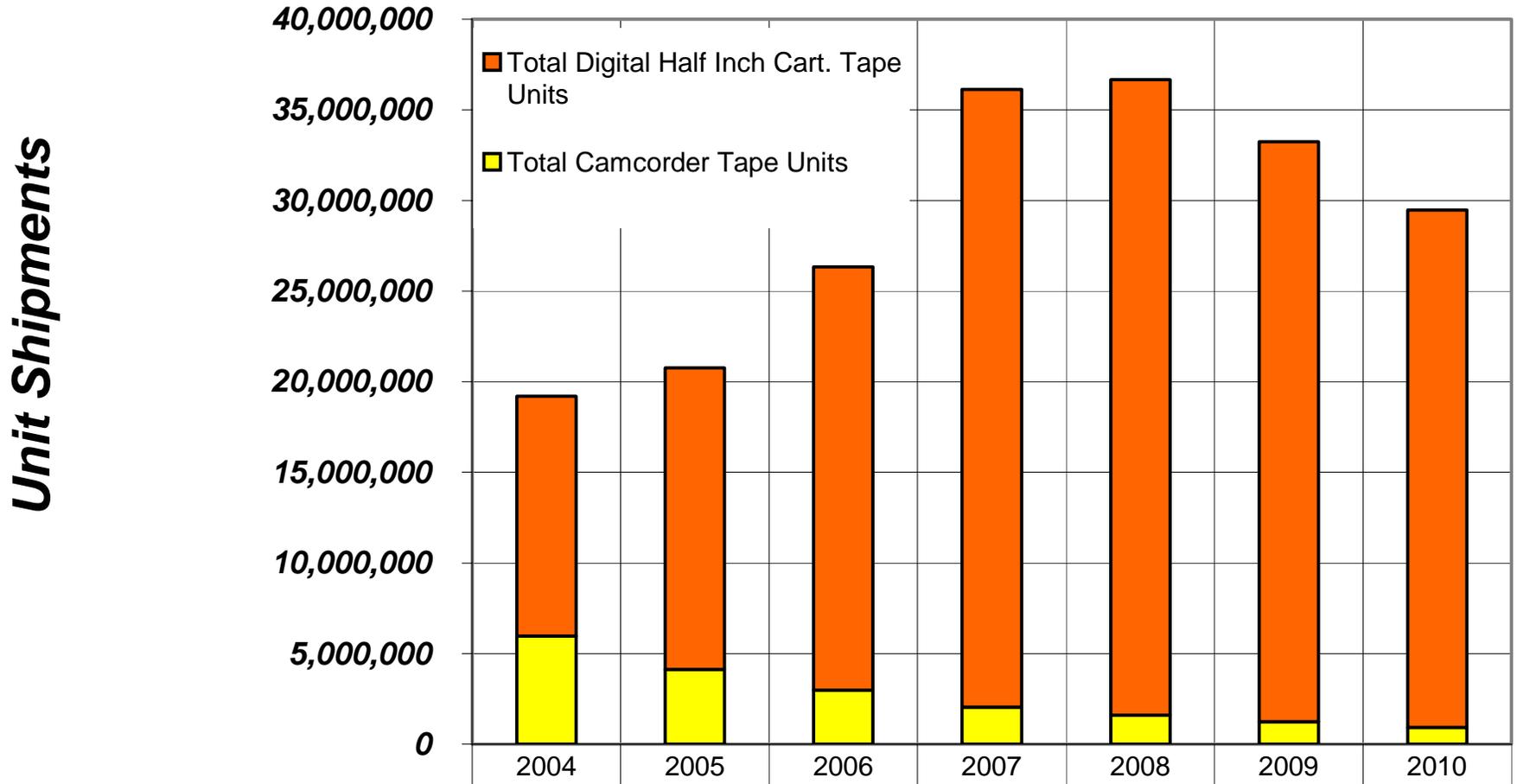
**Dinosaurs Had
White Meat!**

Annual Growth in Archive and Digital Preservation Capacity (TB)



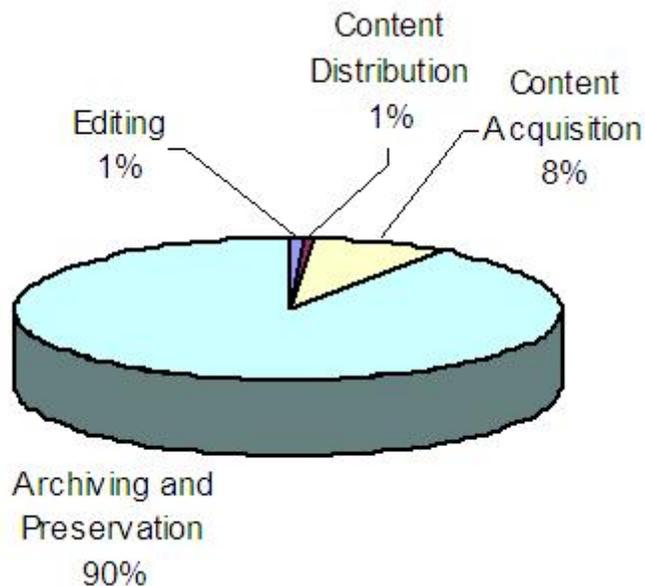
	2004	2005	2006	2007	2008	2009	2010
New Digital Film & Broadcast Arc	133,301	153,247	167,984	177,553	191,385	209,733	233,860
Conversion & Preservation	1,403,766	2,760,342	5,347,536	10,058,641	12,735,554	13,898,868	14,534,241

Content Creation, Distribution & Archive Market (Tape Cartridge Shipments)

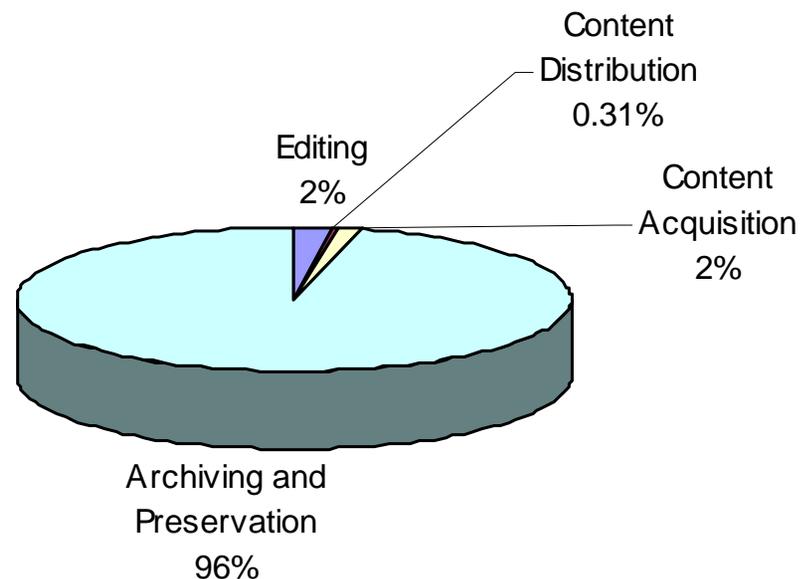


Storage Capacity Distribution for Entertainment Workflow Segments

2004

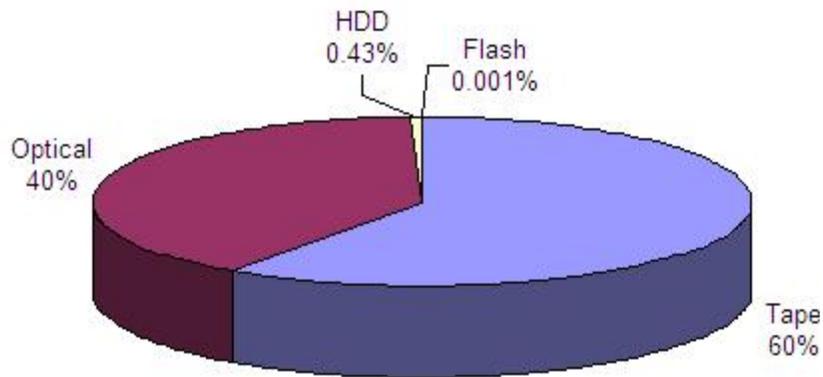


2010

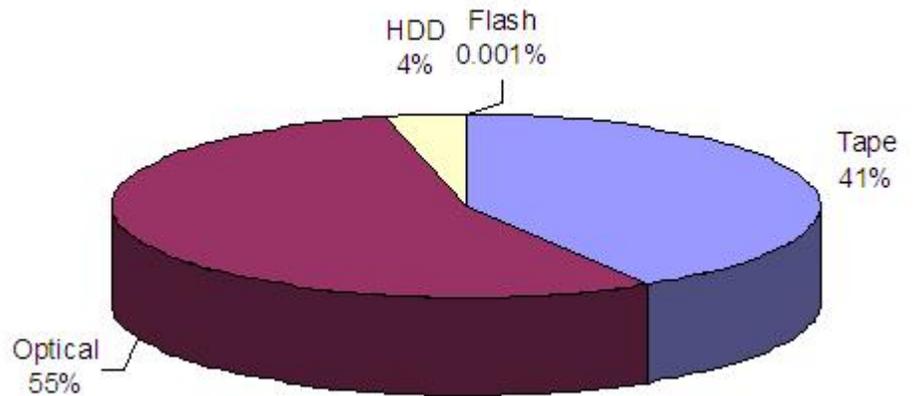


Digital Storage Media Unit Market Share

2004



2010





Conclusions



- Digital Storage is important in all segments of the entertainment workflow
- Different storage media are optimized for different activities in this workflow
- Preservation and Archiving use the greatest quantity of digital storage today and increasingly in the future
- Tape is the predominant storage media (especially for preservation and archiving) but optical and even disk will find increased usage in the next few years
- Materials presented here are abstracted from the **2005 Digital Storage in Entertainment Creation and Distribution Report** available in the Reports area of: <http://www.tomcoughlin.com/techpapers.htm>

The End

