

# Library of Congress Designing Storage Architectures

April 15, 2024

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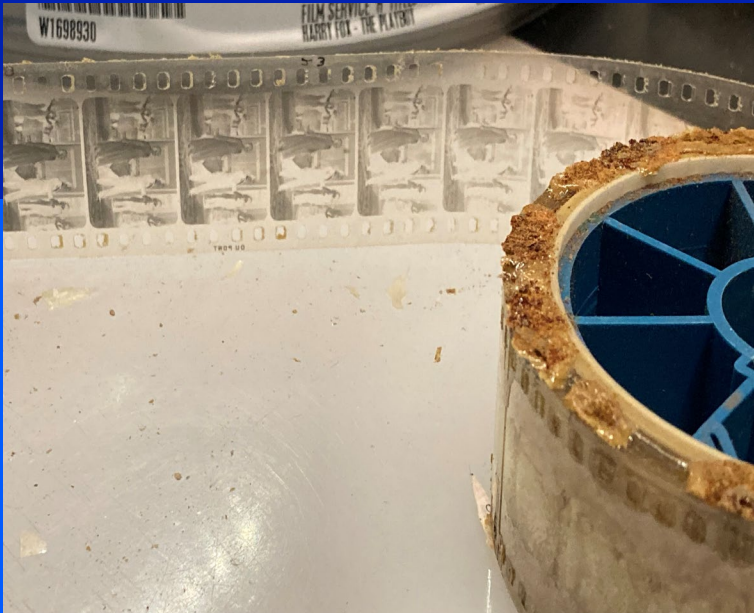
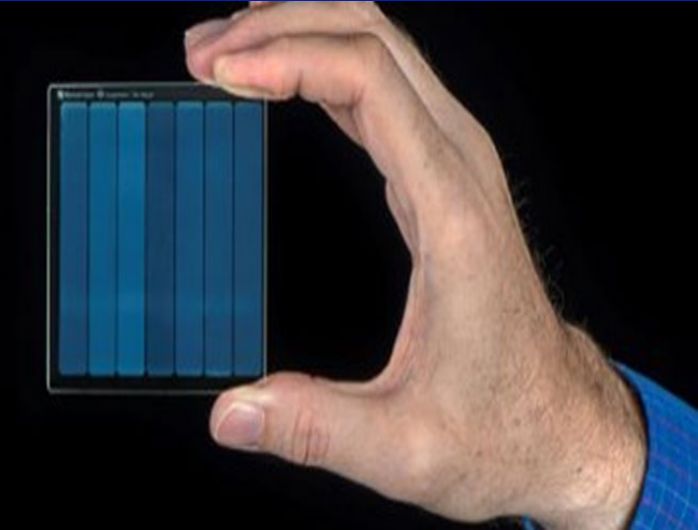


# Agenda

- 1 A Quick Review
- 2 The Storage Dilemma
- 3 Everything is Bigger
- 4 Data Reduction POC
- 5 Questions?

# Quick Review

- Physical Storage Challenges
- Digital Storage Challenges
- Goal: Multi-Cloud
- Goal: New Media Format

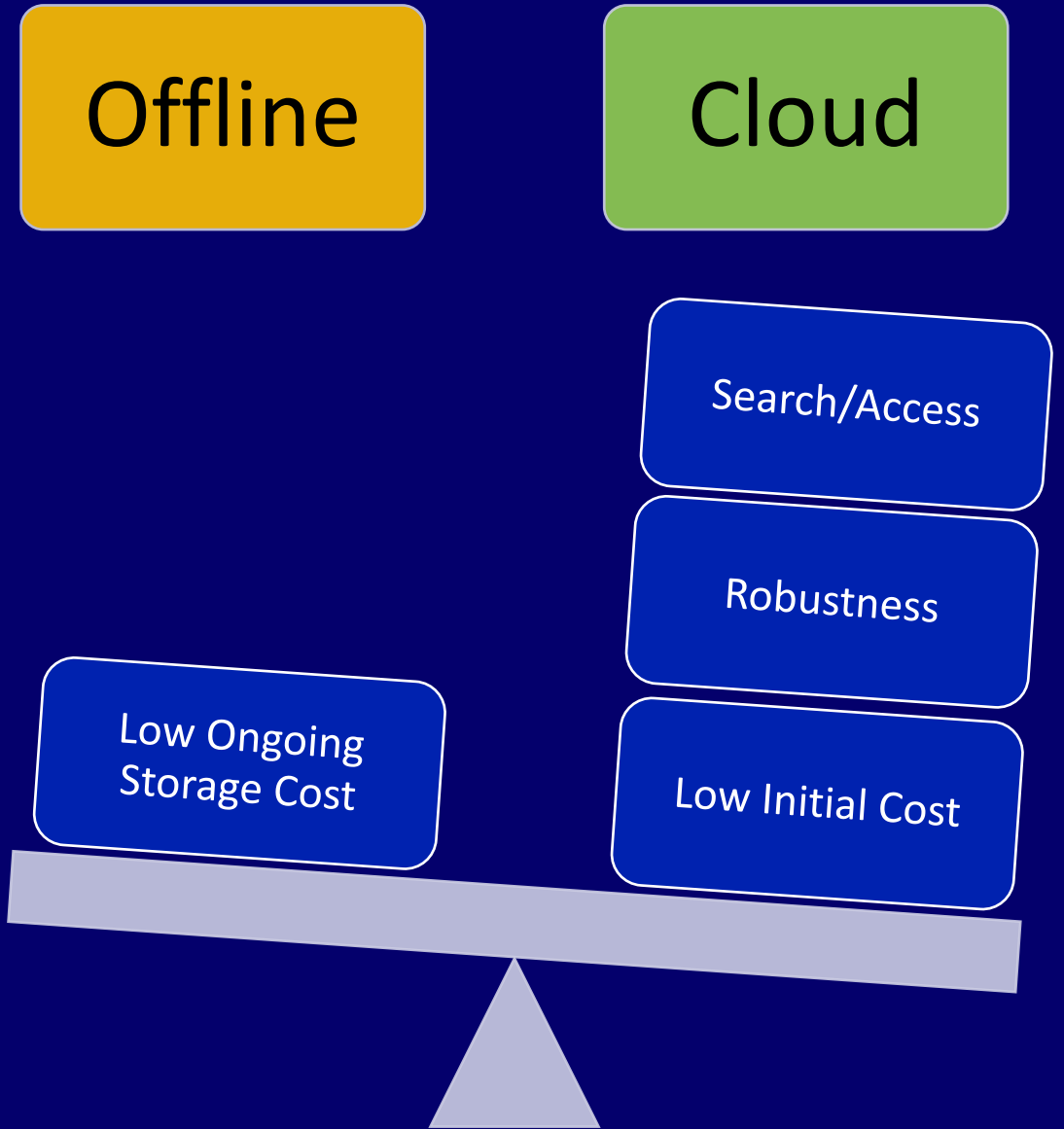


# The Storage Dilemma

“We Can’t Treat Everything the Same”



Our growing Digital footprint



# Everything is Bigger

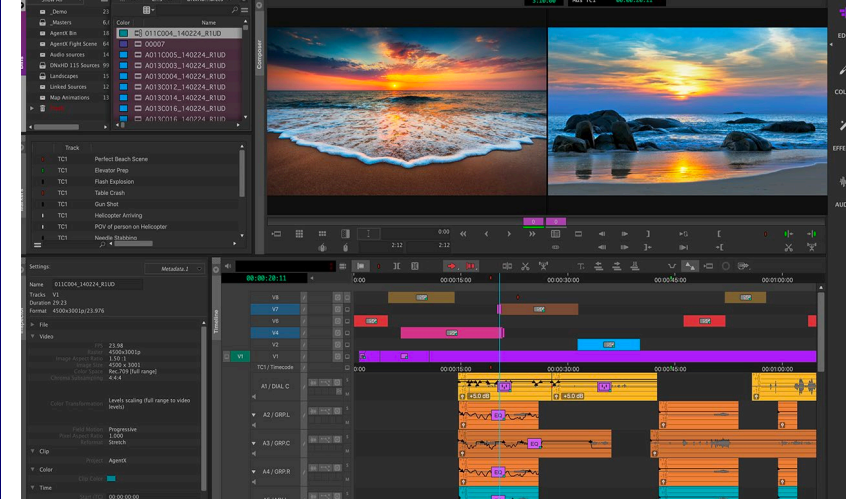
- Bigger Files – Resolutions are getting bigger
- Increased Shooting Ratios
- Increased Physical footprint



# The Balancing Act

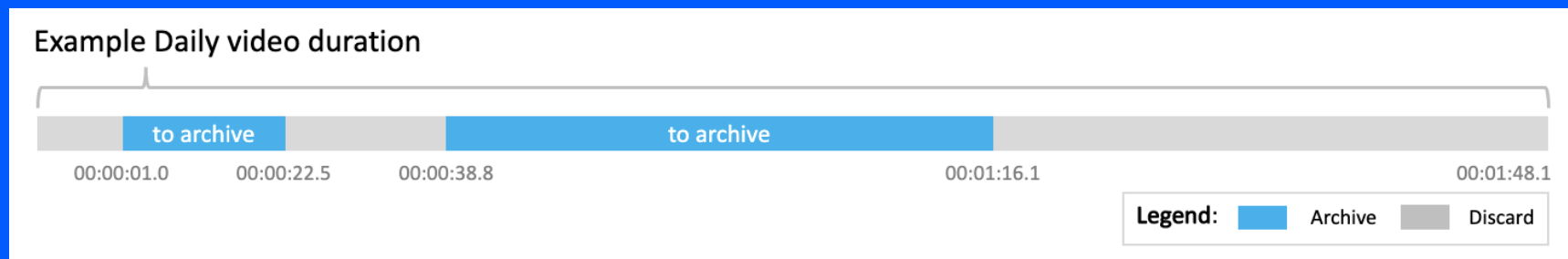
- Some OCF does go in the cloud
  - Select takes (Similar to Cut Negative), EDL's, QT's
  - The essence of program content is readily available
  - Enables egress and re-assembly for future use
- LTO Maintenance and Migration Plan
  - Reduce storage footprint via increase tape density
  - Identify media with longer migration times
  - Discard unneeded data

05	VIDEO	00:07:16	00:12:20	Cut to a close up shot of the Amazon Echo with it's blue LED ring activated
16	VIDEO	00:12:21	00:19:14	Cut to a fade-in shot of the TP-LINK Smart Plug & Amazon Echo together
18	VIDEO	00:19:15	00:26:10	Video of me navigating the iOS App Store to download TP-LINK's Companion App "Kasa"
21	VIDEO	00:26:11	00:31:19	Cut to a very close fade-in shot of the 'Remote Control' option on the Kasa iPhone App
18	VIDEO	00:31:20	00:45:10	Video showing the Kasa App being opened on iOS - then clicking the menu icon as instructed in the voiceover
-	IMAGE	00:45:11	00:51:01	Screenshot of TP-LINK 'Create an account' page - <a href="https://www.tplinkcloud.com/register.php">https://www.tplinkcloud.com/register.php</a>
18	VIDEO	00:51:02	01:05:00	Cut to a shot of the Kasa Dashboard UI whilst clicking on the settings icon within the Smart Plug page
21	VIDEO	01:05:01	01:06:07	Very short and close up shot of the 'Remote Control' option on the Kasa iPhone App - duplicate shot same as the one at 26:00s
12	VIDEO	01:06:08	01:12:09	Cut to a fade in shot of the TP-LINK Smart Plug
22	VIDEO	01:12:10	01:23:07	Video of me navigating the iOS App Store to download the Amazon Alexa Application
-	IMAGE	01:23:08	01:28:22	Screenshot of Amazon account creation page - <a href="http://amazon.to/2JaeEe">http://amazon.to/2JaeEe</a>
25	VIDEO	01:28:23	01:35:18	Cut to a shot of the Alexa App Dashboard and 'Smart Home' menu
25	VIDEO	01:35:19	01:39:03	Fade to a shot of me clicking the 'Get more Smart Home Skills' button
25	VIDEO	01:39:04	01:43:04	Then fade in again to me typing in 'Kasa' in the search bar
25	VIDEO	01:43:05	01:46:21	Fade again to a shot of the TP-LINK Kasa skill being enabled/installed
25	VIDEO	01:46:22	01:54:01	Fade one final time into a shot of the TP-LINK pop up screen prompting the user to enter their login details
25	VIDEO	01:54:02	02:03:19	Cut to blurred shot of me entering my TP-LINK Kasa account details (email and password) - note: I will need to speed this up around 200%
-	IMAGE	02:03:20	02:09:10	Screenshot of TP-LINK 'Create an account' page - <a href="https://www.tplinkcloud.com/register.php">https://www.tplinkcloud.com/register.php</a>
25	VIDEO	02:09:11	02:18:21	Cut to a shot of the Kasa account 'sign-in confirmation' page
25	VIDEO	02:18:22	02:24:16	Fade into a shot of the 'discover devices' prompt within the Amazon Alexa iOS App - once the confirmation page has been closed
25	VIDEO	02:24:17	02:35:12	Cut into a speed up shot (I estimate around 150%) of the 'discover devices' menu
14	VIDEO	02:35:13	02:39:21	Cut to a close up, fade in shot of the Amazon Echo Dot



# Data Reduction POC

- Project IOTA – co-engineering collaboration between WBD and Microsoft’s Commercial Software Engineering team
  - Machine Learning identified 45% of material on “Digital Dailies” could be discarded
  - Three-pronged approach:
    - Detect Clapper boards
    - Use OCR to extract rolls, scenes and takes
    - “Listen” to audio to detect “Cut!”



- <https://devblogs.microsoft.com/ise/archiving-footage-deep-dive/>
- <https://devblogs.microsoft.com/ise/building-an-action-detection-scoring-pipeline-for-digital-dailies/>

Questions?