Evolusi Pengelolaan Arsip Media:
Proses Bisnis & Kompetensi

Yogi Hartono

23 Agustus 2018
Jakarta

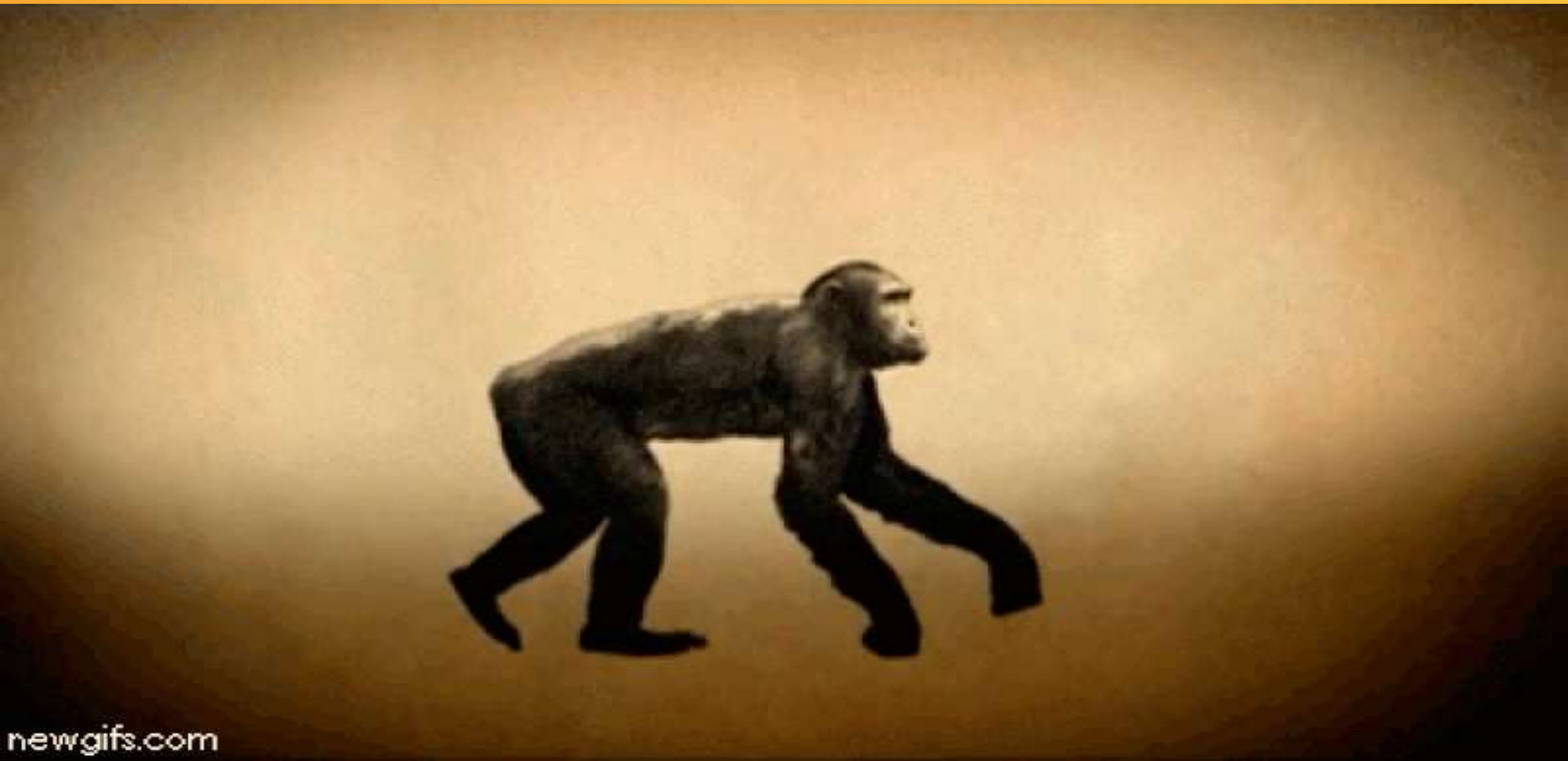
HOLICOPTER VIEW

evolusi pengelolaan arsip media

proses bisnis

kompetensi

EVOLUSI TEKNOLOGI



evolusi arsip data video

P3RI

Shifting dari cetak - digital

tape base /
elekronis mekanis

1980 - 2013

file base / digital
teknologi informasi

2013 - present

Sebelumnya

Pengarsipan berbasis Tape

- Penyensoran manual/cut to cut
- Pengulangan ingest/play
- Proses segmentasi analog
- Editing dan QC berbasih kaset
- Pengarsipan Kaset

- Overheat VTR dan alat rekaman
- Kehilangan kaset
- Pengulangan Ingest
- Teknologi lama

Tape Playback On Air

British Film Institute,
ARSIP NASIONAL INGGRIS

Library Tape Footage Reuter

BBC ARCHIVE TAPE, LONDON

Sesudahnya

Pengarsipan berbasis File

- Penyensoran berbasis file
- Proses ingest tersentral
- Proses segmentasi digital
- Editing dan QC berbasis file
- Pengarsipan Digital

- Workflow lebih efisien
- Proses inges terpusat/single
- mengedit lebih fleksibel dan kreatif
- Proses restore data yang cepat
- Teknologi digital

NASA ARCHIVE

DKRZ DATACENTER

The German Climate Computing Center (Deutsches Klimarechenzentrum, DKRZ) is a central service center for German climate and earth system research.

Data Archive

8 automated Oracle/StorageTek SL8500 tape libraries
8 robot arms per library
75.000 slots for magnetic cassettes
65 tape drives (LTO-4/5/6 und T10000B)
more than 190 Petabytes total capacity

BIG DATA

500 TB - 10 PHIETA

1 TB

=

20.000

ALL BOOKS
COLLECTION PNRI

=

10 TB

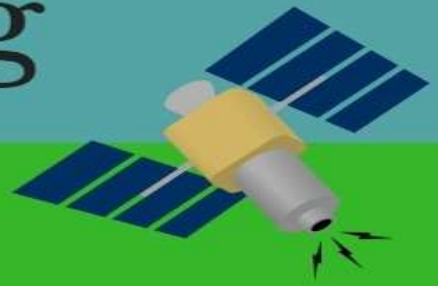
PROSES BISNIS

Entreprice Content Management

Data Mining

P3RI
Perkumpulan Profesi Pengelola Haked Indonesia

1. Satelit



2. Internet

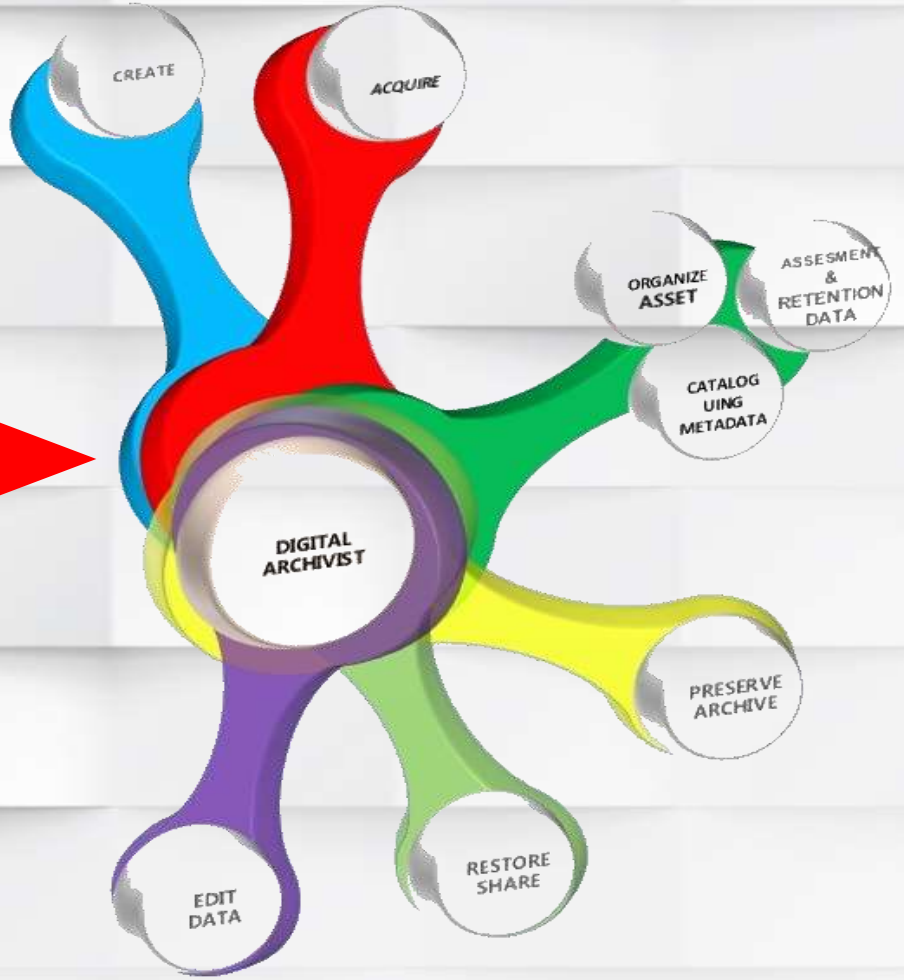
internet

PROSES BISNIS

YOGI HARTONO

PROSES ARCHIVE DATA

SERVER CLOUDS/NAS



SERVER ROBOTIC
DEEP ARCHIVE

JENIS DATA

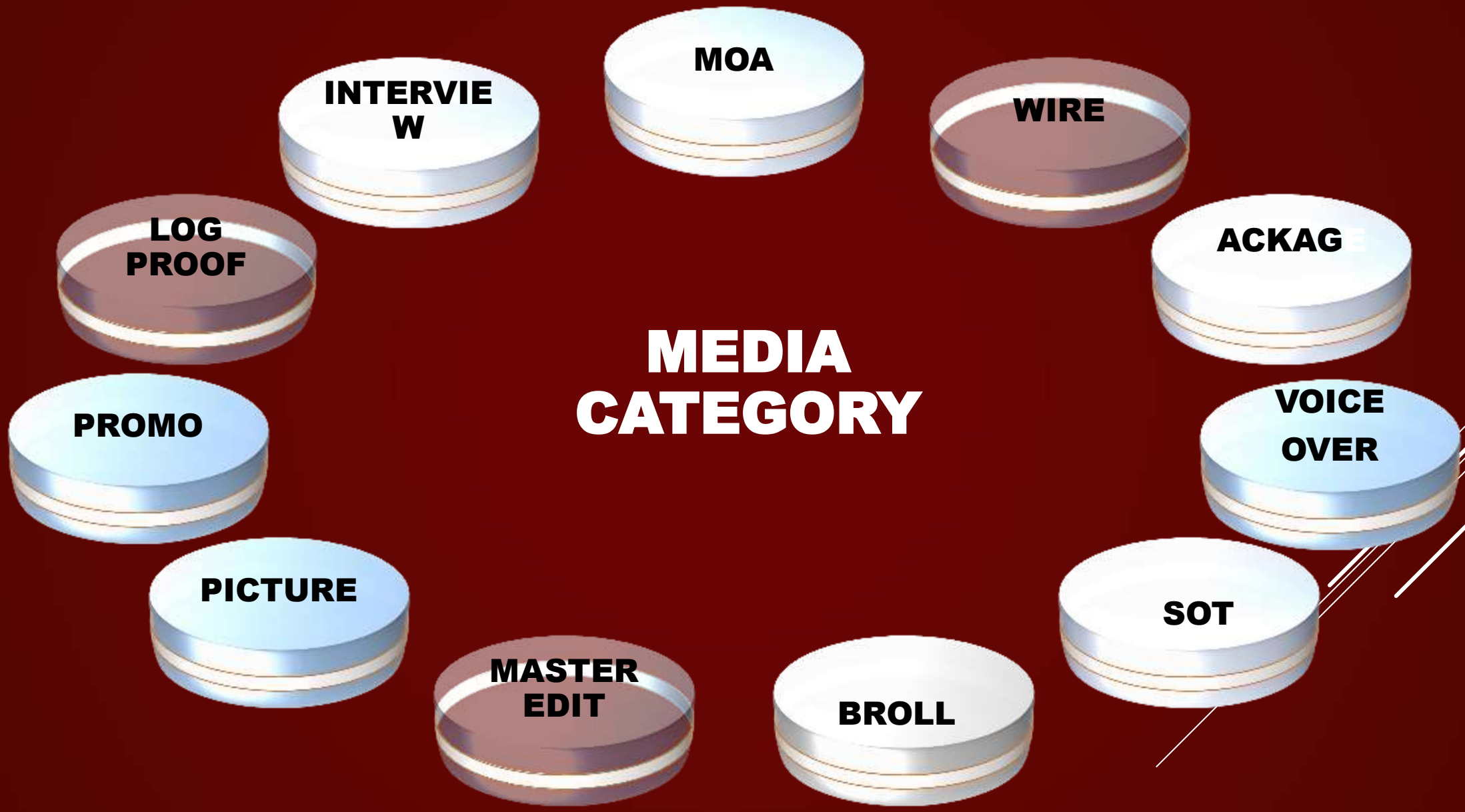
Vital.

Important.

Useful.

Non-Essential.

CATEGORY FILE



ACQUIRE

Receive digital file based conten from distributor 3rdparty; Wire, and news gathering

IDENTIFIKASI TUJUAN PENYIMPANAN VIDEO

Apa tujuan anda mengoleksi video tersebut ?
Siapa yang menjadi target dari koleksi kita ?
Apa format dan jenis koleksi yang ada simpan?

ASPEK "VITALITAS" VIDEO

Apakah tingkat resikonya jika video tersebut hilang?
Apa perlu di back up?

TENTUKAN STATUS RIGHTS

Apakah secara legal
video bisa didistribusikan ?

STATUS KONDISI FILE VIDEO

Apakah kondisi video bisa dibaca di format lain?
Apakah harus ditransfer dengan format tertentu?

ELEMEN METADATA

- Date of Creation.
- Title.
- Retention Period.
- Author.
- Date of Transaction.
- Access control information.
- Links to other versions.
- Location.
- Format.

Archive Prioritization Criteria

Archival Value?

IS THE VIDEO SIGNIFICANT AND USEFUL AS EVIDENCE OR INFORMATION?

Unique?

IS THIS VIDEO A COPY? IS THE ORIGINAL OR A HIGHER QUALITY COPY BEING PRESERVED ELSEWHERE?

Has Context?

DOES THE VIDEO HAVE ENOUGH CONTEXT TO BE UNDERSTANDABLE AS EVIDENCE OR INFORMATION?

Rights?

DOES THE VIDEO BELONG TO SOMEONE ELSE, AND ARE YOUR RIGHTS TO REUSE IT LIMITED?

INGEST ROOM / MEDIA MANAGER

THE LTO ROADMAP:

Comparing capacities for each generation of LTO

INTRODUCING...

LTO-8

- 12 TB of Native Storage Capacity, 30 TB Compressed (2.5:1 Compression)
- 360 MB/Sec Native Throughput
- 10^{-19} Bit Error Rate

One LTO-8 tape cartridge holds 12 TB of data.

12 TB =

8,000 MOVIES

2,880,000 SONGS

7,140,000 PHOTOS

MENGAPA MEMAKAI ROBOTIK LTO ?

Highly scalable

New LTO-8 tape cartridge holds up to 30TB compressed data[1]

Economic

Lowest cost storage at $0.007 per GB for life[2]

Efficient

Tape energy consumption <2% of equivalent storage using HDDs[4]

Secure

Offline and on-premises protection against ransomware

LTFS

ROBOTIK

ROBOTIK LTO

User sedang akses data arsip di ruang media central

KOMPETENSI

Fundamental kompetensi arsip tradisonal

Arsip digital

SAMA

BERBEDA

Peta Kompetensi

Peran baru dalam hal teknis

• Peran traditional : menangani "media lama"	• masih mengelola arsip (manual) meski mulai berkurang
• File specialist	• peran baru sebagai spesialis file
• Monitoring activity & QC	• tugas utama sebagai teknisi AV
• Data/Storage Management	• peran baru dalam hal teknis pengelola data/storage
• Linked roles	• peran baru sebagai publishing, data protection, data mining, digital restorasi, post production

Mengetahui Pengelolaan Storage Data

- Memahami sistem dan manajerial file
- Memahami security/keamanan file
- Memahami sistem back-up dan Disaster Recovery
- Memahami data mining

Mengetahui Proses Ingest

- Memahami penggunaan tape dan data file;
- Memahami bahasa pemrograman software
- Mampu menggunakan alat validasi video, wave form; spektascope; color bar dll

Mengetahui Akses Data

- Memahami infrastruktur dan networking data
- Memahami model pendistribusian data (Satelit; VOD; Internet)
- Memahami alat alat proteksi data

Mengetahui Preservasi Digital

- Memahami sejarah teknologi arsip/rekod
- Memahami peralatan rekam, tape dan VTR
- Memahami migrasi data (transfer data analog ke digital)

Kemampuan Manajerial Digital

- Kemampuan Manajerial Digital
- Memahami bidang teknical dan IT konsep serta penerapannya.
- Merencanakan serta mengevaluasi untuk mencari solusi.
- Bekerjasama dengan tim expert sebagai digital archivist