Web99

A TI-99 PROJECT

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Disk Collection of most 99ers:

- Too large to maintain
- Unstructured
- No way to search
- Full of Duplicates of entire Disks or single Ti Files
- Adding new stuff creates more and more Duplicates
- It‘s stored on the wrong computer

Problem Situation

- The needed Ti Program never seems to be around
- Finding out how to run unknown programs is a pain
- No Disk Catalog in Rom/Grom
- PROGRAM can be of any type: Ti Basic, XB, Assembler, Gram File...

How about a Search Engine?

- Extracts all information from every single Disk Image
- Extracts all information from every single Ti File from that Disk Image
- Checks your Ti Files and Disks for uniqueness
- No Duplicates in your Search Result

How do Search Engines work?

- creating an Index for the searchable data
- The used Analyzers and Tokenizers define the intelligence
- To search within the indexed data the data is no longer needed
- To return the data in its original form it can be stored in the Index

Disk Examination: Night Mission



Disk Meta Data

- Disk Name: **NIGHTMISSN**
- Media Protection: **No**
- Disk Type: **SDSS**
- Tracks per Side: **40**
- Bytes per Sector: **256**
- Bytes Total: **91260**
- Sectors per Track: **9**
- Sectors Total: **360**
- Sectors Used: **195**
- Sectors Free: **165**

Disk Examination: Night Mission



Index Record

NAME	SIZE	TYPE	P
NMJOY	38	PROGRAM	N
NMJOYCASS	49	INT/VAR254	N
NMKEY	39	PROGRAM	N
NMKEYCASS	49	INT/VAR254	N
LOAD	13	PROGRAM	N

Disk Examination: Night Mission



File Record

- File Name: **NMJOYCASS**
- File Protection: **No**
- File Sectors: **49**
- File Type: **Internal**
- Record-Type: **Variable**
- Record-Length: **254**

Are these Files identical?

Required

- Same Binary
- Same File Name
- Same Size
- Same File Type
- Same Record Type
- Same Record Length

Not Required

- Same Physical Disk Layout
- Same Logical Disk Layout
- Same File Clustering
- Same File Protection Status

Are these Disks identical?

Required

- Same Files
- Same File Names
- Same Disk Name

Not Required

- Same Physical Disk Layout
- Same Logical Disk Layout
- Same File Clustering
- Same Disk Size
- Same Disk Protection Status

Hash Comparison

- Generating a “Hash“ for every single Ti File & Disk
- Hash is based on the Meta Data and the Binary Data
- Hash is compared against other Hashes
- Web99 generates Hashes for each
  - Ti File Binary
  - Ti File
  - Disk File Record
  - Disk

Calculation IDs

- File Name: **NMJOY**
- File Sectors: **38**
- Type: **Program**
- Binary: **01 B9 13 E6 12 5F 37 D7 04 92 18 A9 04 88 18 CF 04 7E 19 6E 04 74 19 C5 04 6A 19 F3 04 42 13 E8 04 38 14 39 04 2E 1A 72 04 24 1A A2 04 1A 14 C5 ...**
- File Protection: **No**
- Disk Name: **NIGHTMISSN**
- Path: **D:\TITREFF2015\BERRYSTICK\The BBS\NIGHTMIS.dsk**
- Binary ID: **F1 2A F6 36 BF 97 F1 08 38 9B 7F E0 7E BB 4E 69** Calculating...
- TiFile ID: **9D 24 9A 91 42 BE 11 1B 6F F1 D6 C6 90 D6 82 39** Calculating...
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-

Calculation IDs

- File Name: **NMJOY**
- File Sectors: **38**
- Type: **Program**
- Binary: **01 B9 13 E6 12 5F 37 D7 04 92 18 A9 04 88 18 CF 04 7E 19 6E 04 74 19 C5 04 6A 19 F3 04 42 13 E8 04 38 14 39 04 2E 1A 72 04 24 1A A2 04 1A 14 C5 ...**
- File Protection: **No**
- Disk Name: **NIGHTMISSN**
- Path: **D:\TITREFF2015\BERRYSTICK\The BBS\NIGHTMIS.dsk**
- Binary ID: **F1 2A F6 36 BF 97 F1 08 38 9B 7F E0 7E BB 4E 69**
- TiFile ID: **9D 24 9A 91 42 BE 11 1B 6F F1 D6 C6 90 D6 82 39**
- DiskFileRecord ID: **D4 8C 24 06 57 39 56 1A 4C 39 9C 40 4C 7D 4B 00**
- Disk ID: **F5 44 7F 6D 96 70 88 7A EA 68 53 01 BB 52 15 4E**

How Files are stored in Web99

Container for Disk File Records

File Name: **NMJOY**

File Sectors: **38**

Type: **Program**

File Protection: **No**

Disk Name: **NIGHTMISSN**

Disk ID: **F5 44 7F 6D 96..**

Binary ID: **F1 2A F6 36 BF..**

TiFile ID: **9D 24 9A 91 42..**

DiskFileRecord ID:

D4 8C 24 06 57 39 56 1A 4C 39 9C 40 4C 7D 4B 00

Container for Ti Files

File Name: **NMJOY**

File Sectors: **38**

Type: **Program**

Binary ID: **F1 2A F6 36 BF..**

Ti File ID:

9D 24 9A 91 42 BE 11 1B 6F F1 D6 C6 90 D6 82 39

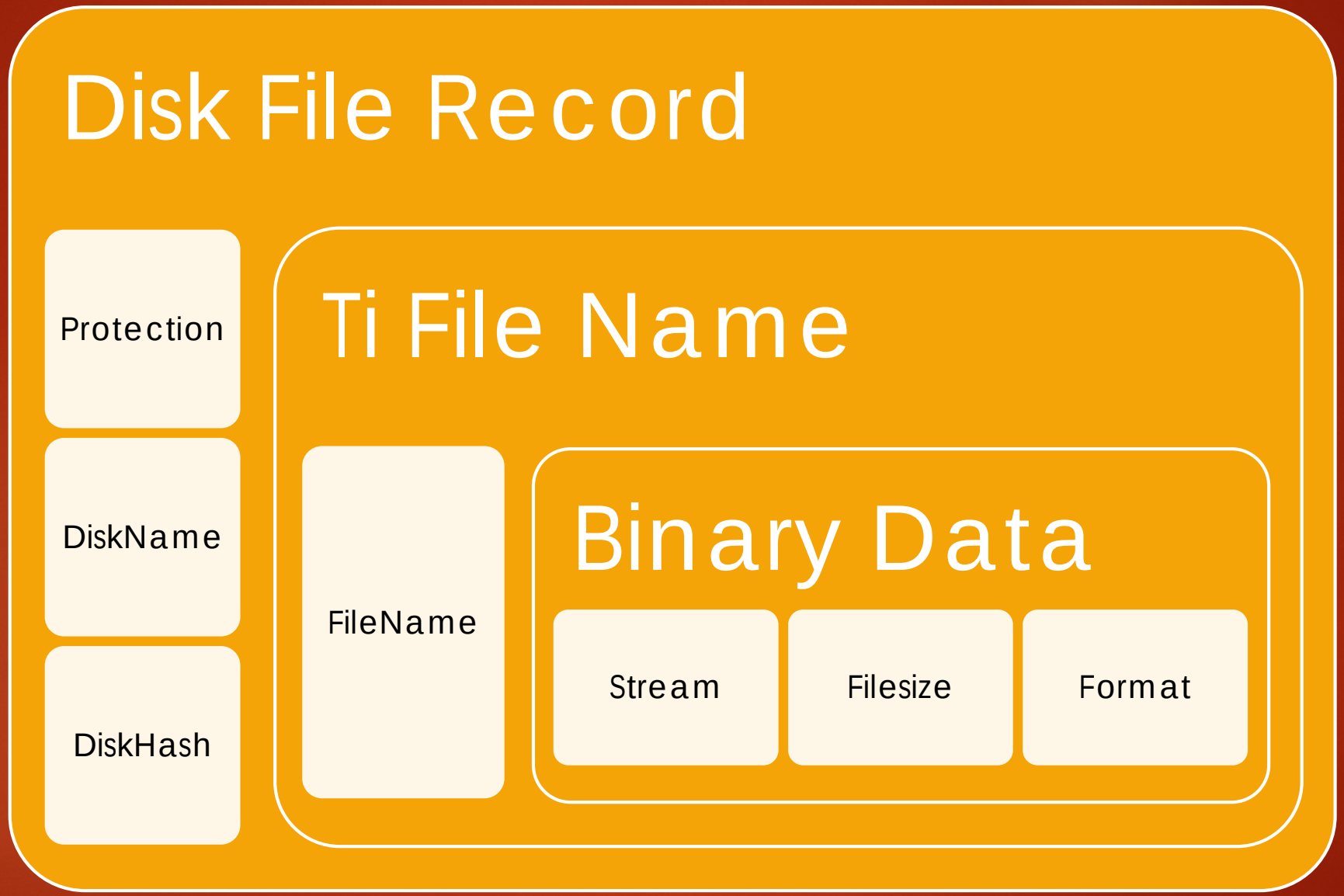
Container for Binaries

Binary:

01 B9 13 E6 12 5F 37 D7 04 92 18 A9 04 88 18 CF 04 7E 19 6E 04 74 19 C5 04 6A 19 F3 04 42 13 E8 04 38 14 39 04 2E 1A 72 04 24 1A A2 04 1A 14 C5 ...

Binary ID:

F1 2A F6 36 BF 97 F1 08 38 9B 7F E0 7E BB 4E 69


Disk File Record
Protection
DiskName
DiskHash
Ti File Name
FileName
Binary Data
Stream
Filesize
Format