Exploring Stephen Dwoskin's Digital Legacy

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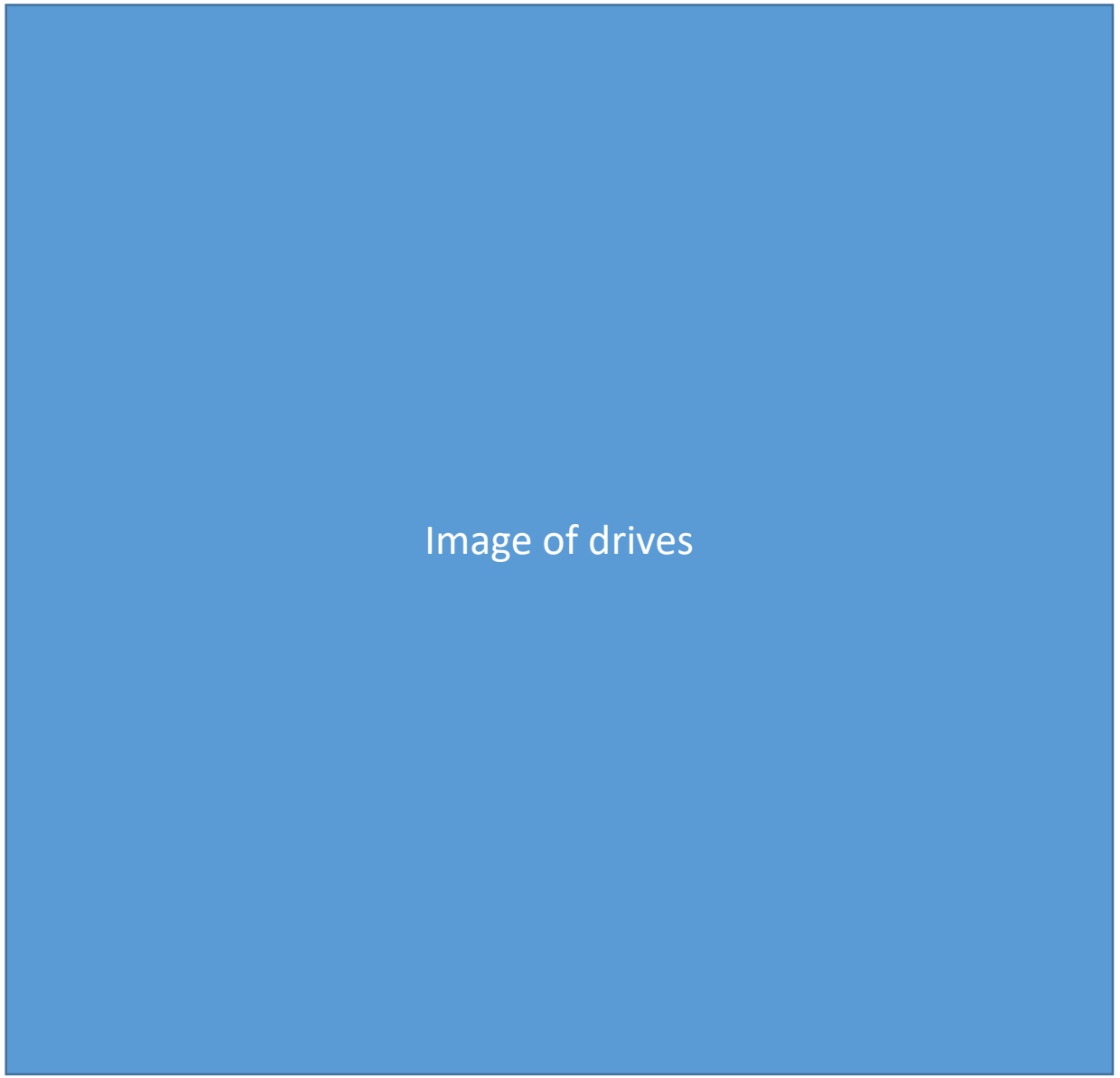
Dwoskin’s Drives

What we know:

- 20 Drives
- Estimated 12TB of data
- 6 Drives analysed here (01, 02, 03, 04, 06, 10)

What we don’t know:

- Dwoskin’s working pattern
- The processes and tools used in his filmmaking
- The content on the drives



Aims of the Research

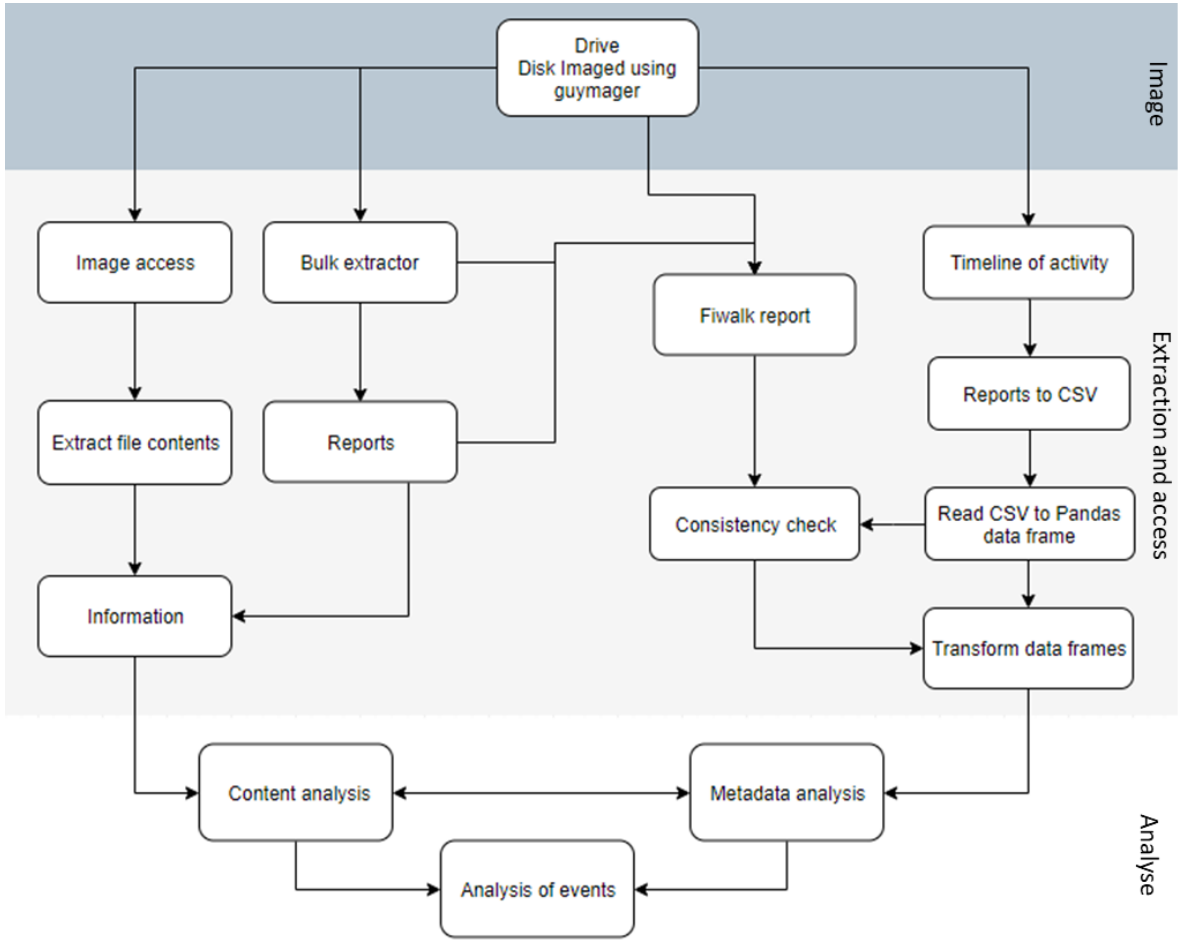
- Utilise digital forensics tools to explore the digital archive.
- Make the findings of this exploration accessible.
- Contribute to the understanding of the technological changes of independent filmmaking from the 1960’s onwards
- Explore the patterns of Dwoskin’s personal artistic development
- Contribute to the discipline of digital archiving

The Method

Disk Imaging

Extraction and access

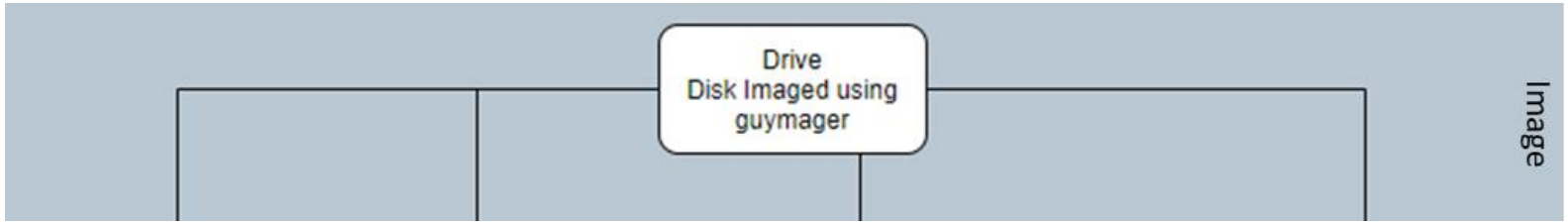
Analyse content and metadata



Disk Imaging

A disk image:

- is a copy of the drive
- is created using the BitCurator tool Guymager

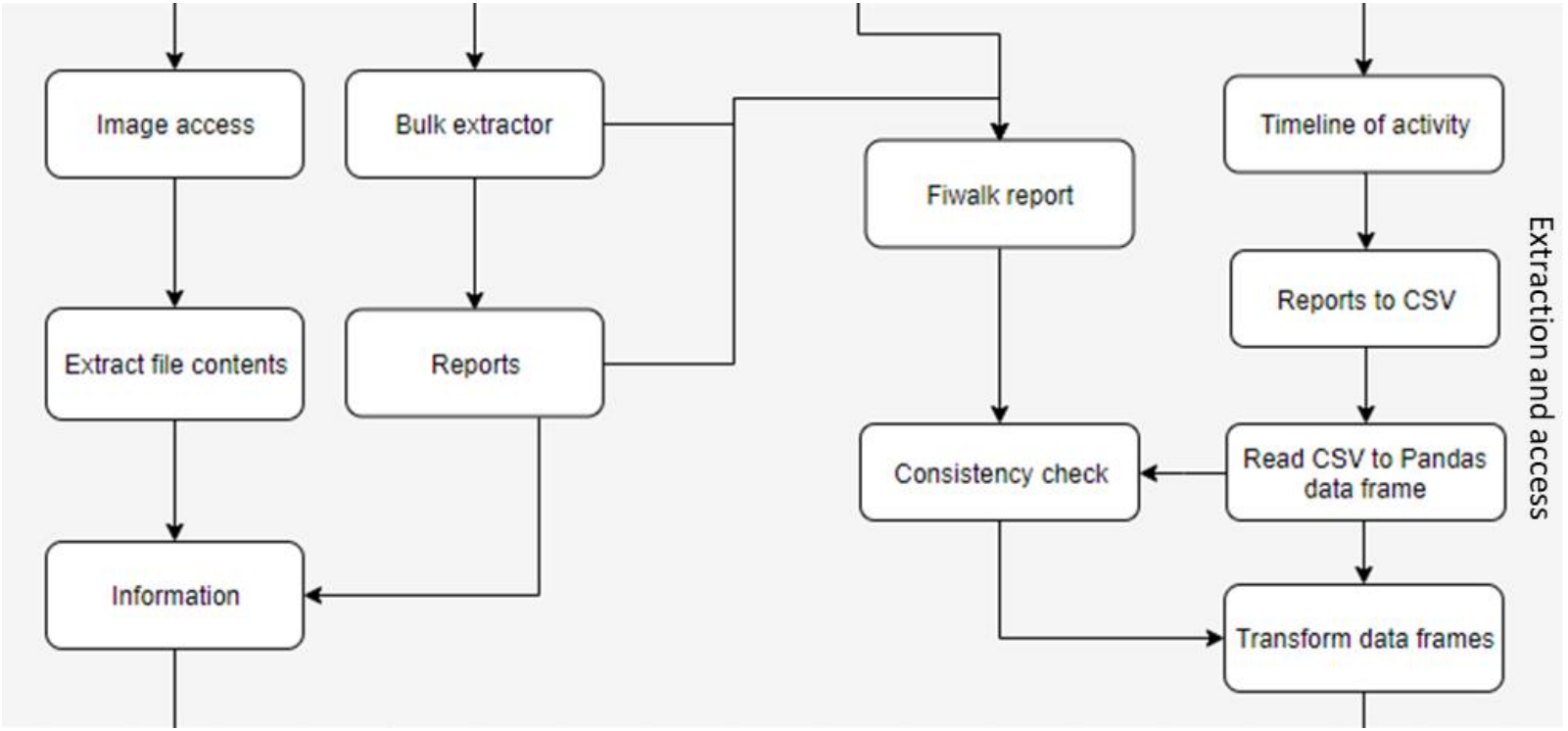


Preserves the original:

- drive
- content
- metadata

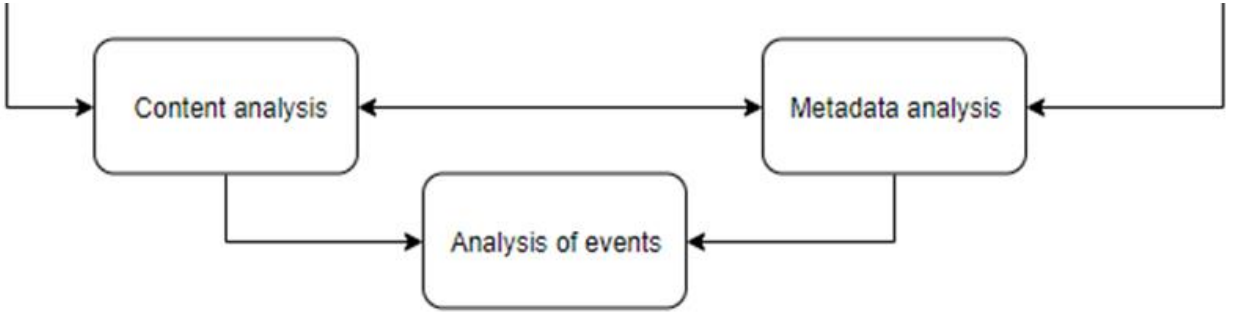
Extraction and access

- Image access
  - Extract and explore contents
- Bulk extractor
  - Summarised and sorted content in human readable format
  - e.g email addresses, URL's, images, key words
- Fiwalk (BitCurator) /mactime (Sleuthkit)
  - Metadata extraction
  - Source of timeline data



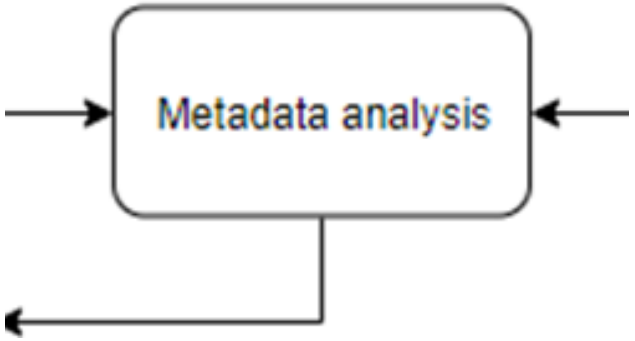
Analyse content and metadata

- Interdependent branches
- Metadata and Content analysis combine to inform analysis of events
- This stage involves an iterative process of visualisation to increase accessibility of data

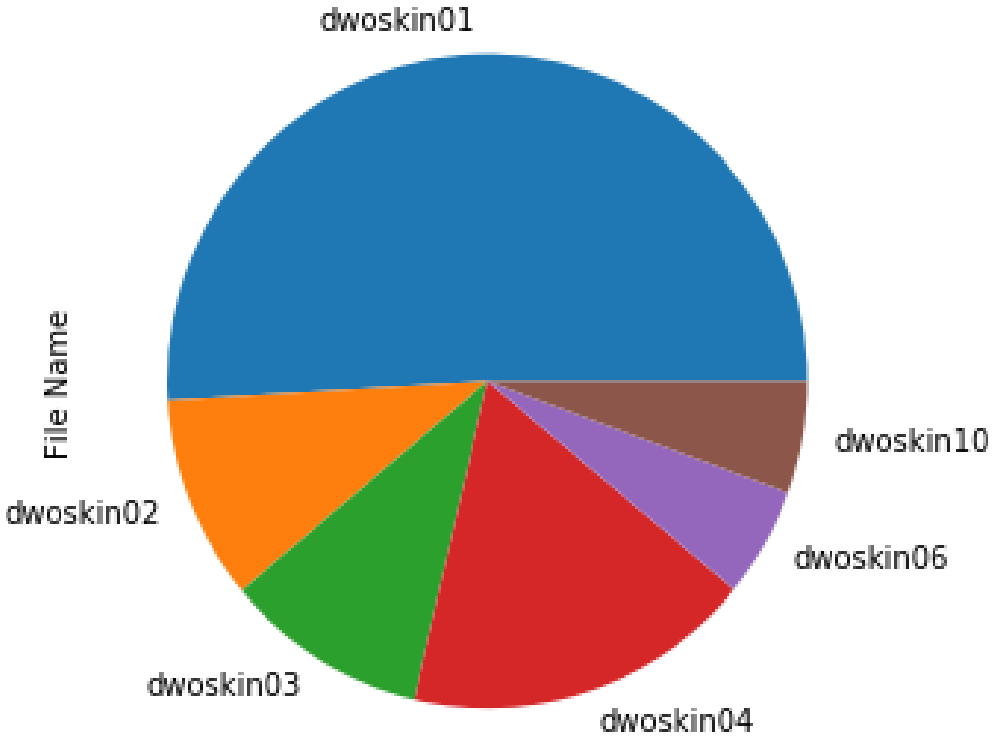


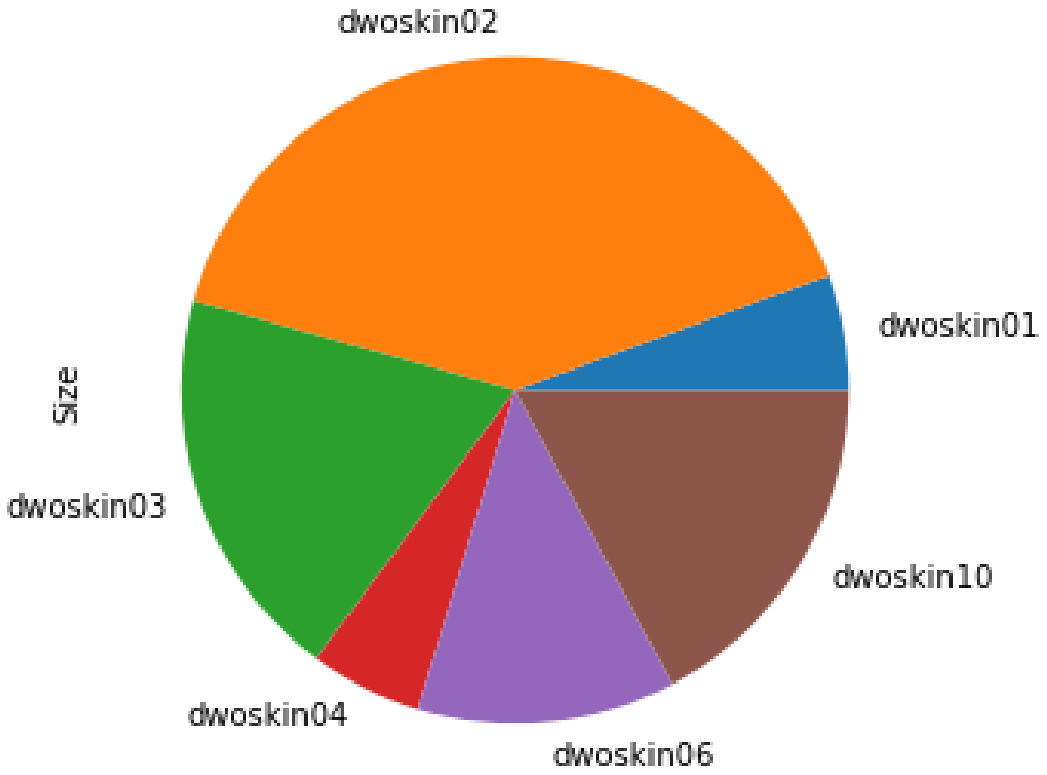
Analyse

Distribution of Data

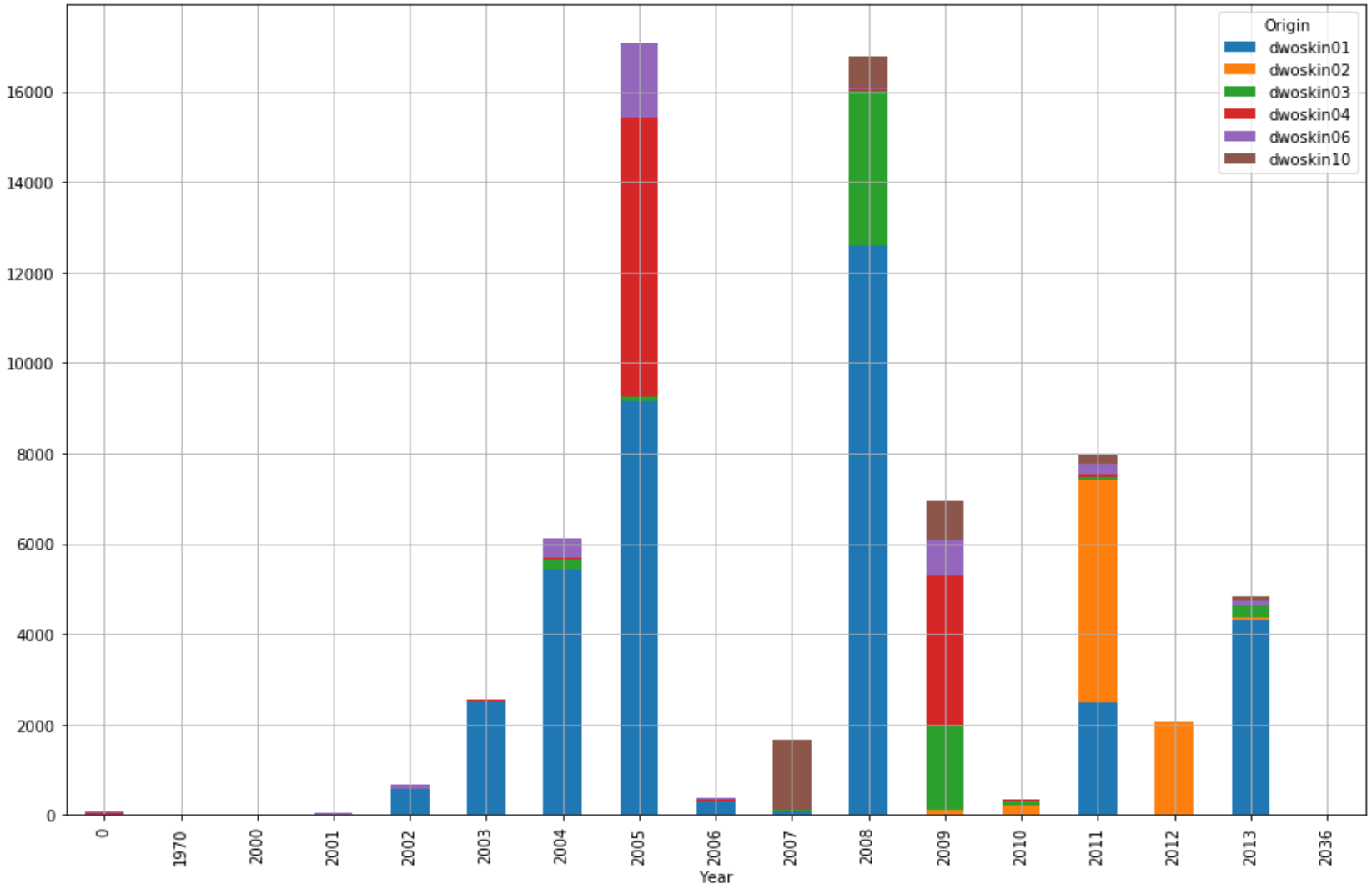


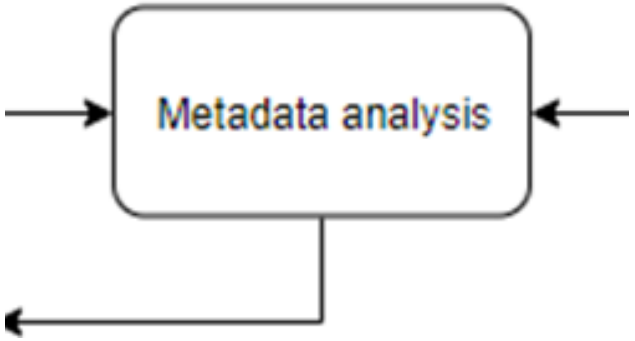
- Variable number of files and file size
- Larger quantity of files does not mean large size
- Average file size can be indicative of content of drive





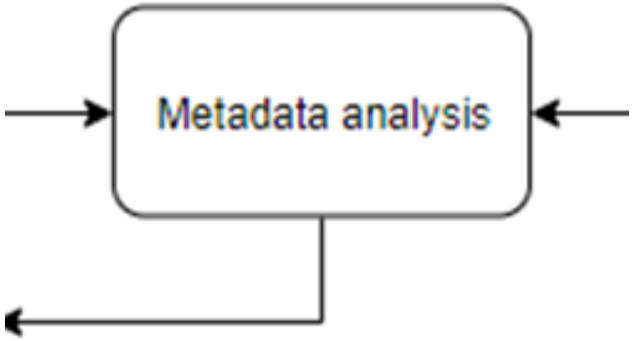
Distribution of Timeline Activity

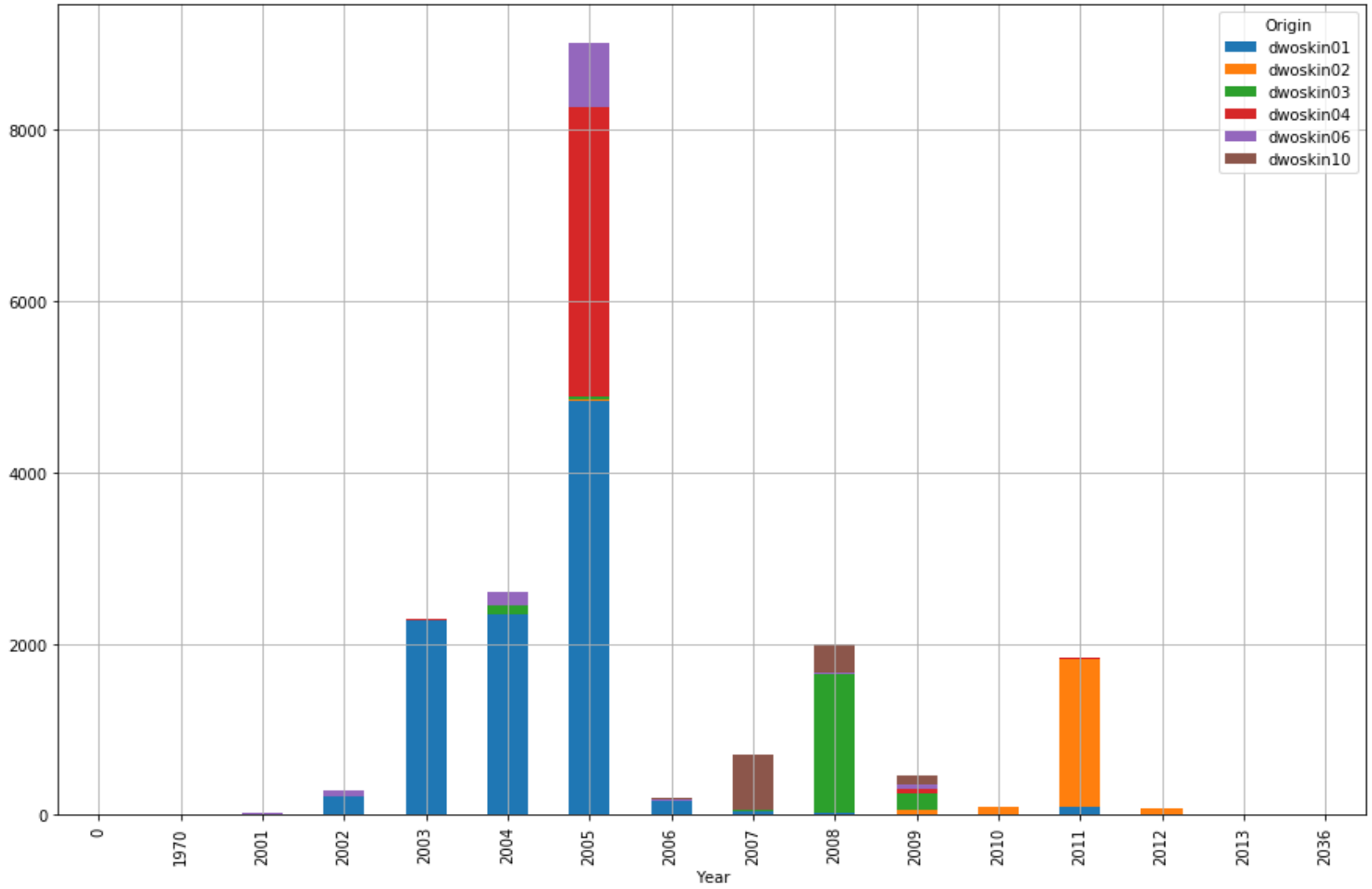




- Drive usage clustered
  - 01 used throughout the period
  - Others more clustered usage
  - Different types of drive?
- Shows all activity so not necessarily file creation

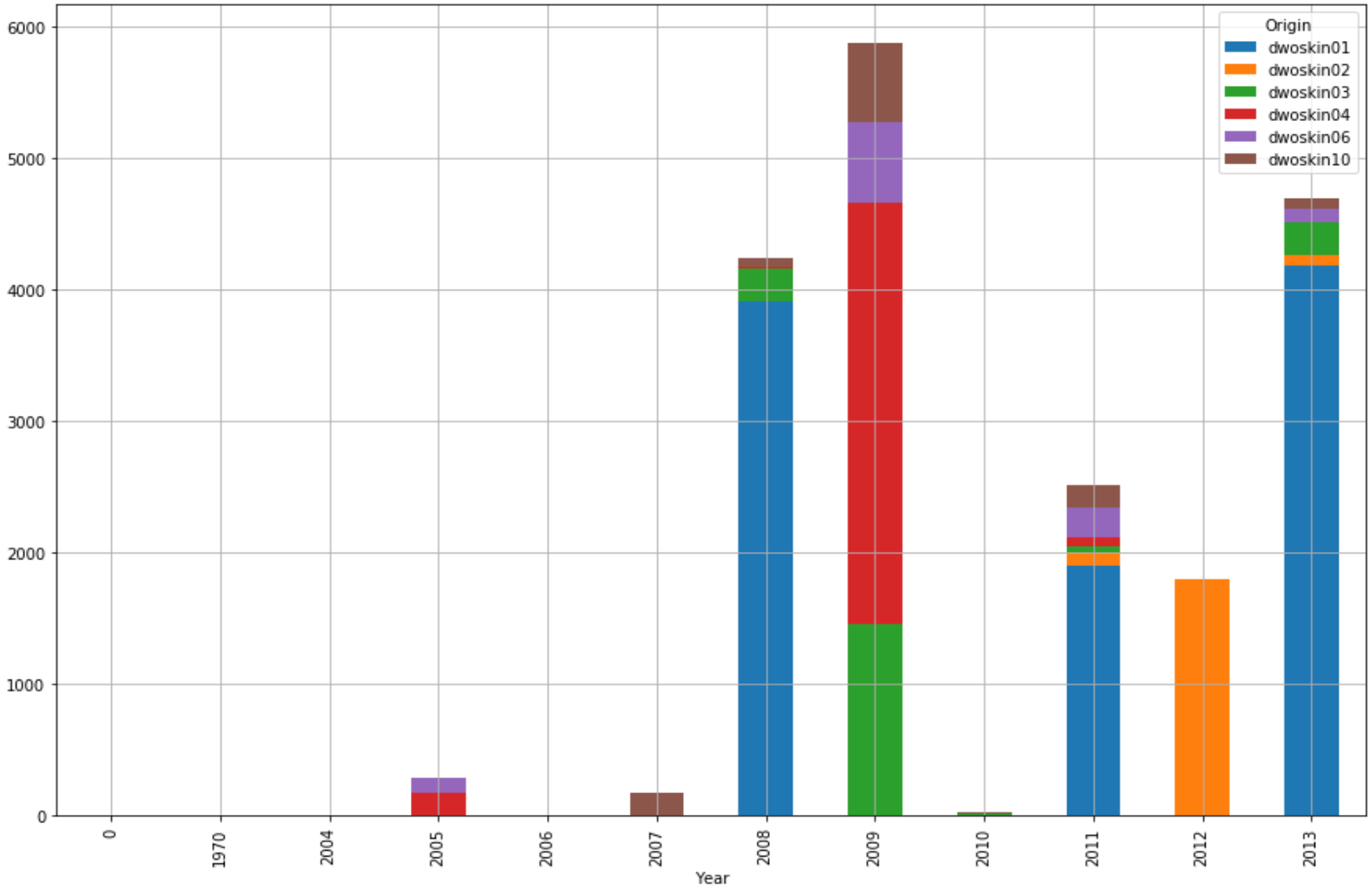
Timeline of Modification Activity

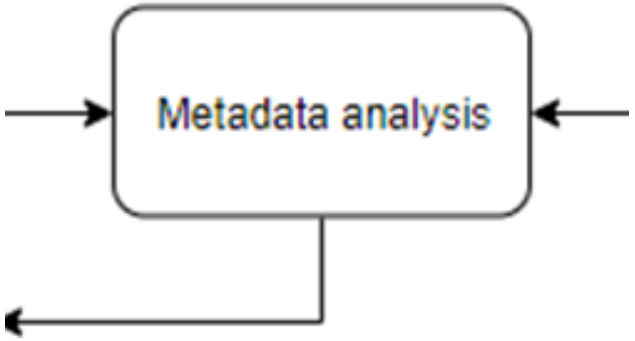




- Modification indicates active engagement with the file.
- Gives an indication of when a project was ‘finished’ in terms of actively changing file content
- 01, 04 and 06 seem to be earlier projects compared to 02, 03 and 10.
- 02 dominates in his final years 2010-2012

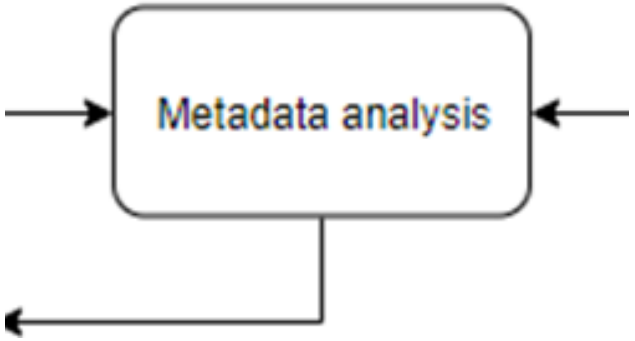
Timeline of Access Activity





- Access indicates passive engagement with the file.
- Gives an indication of when a project was most recently reviewed
- Access common across all drives although definite peaks and troughs
- 02 was the only drive accessed in Dwoskin's final year
- 2013 – the year after Dwoskin's death

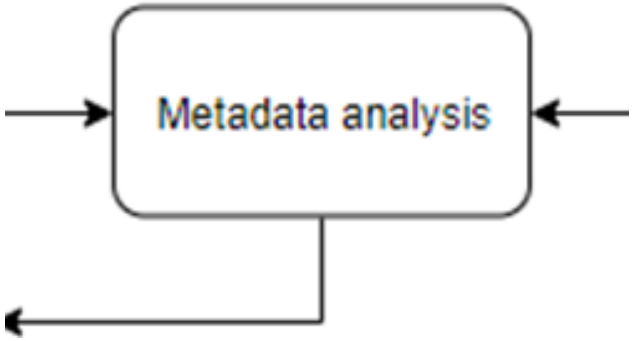
Profiling Drive Activity



Month and Day graphs

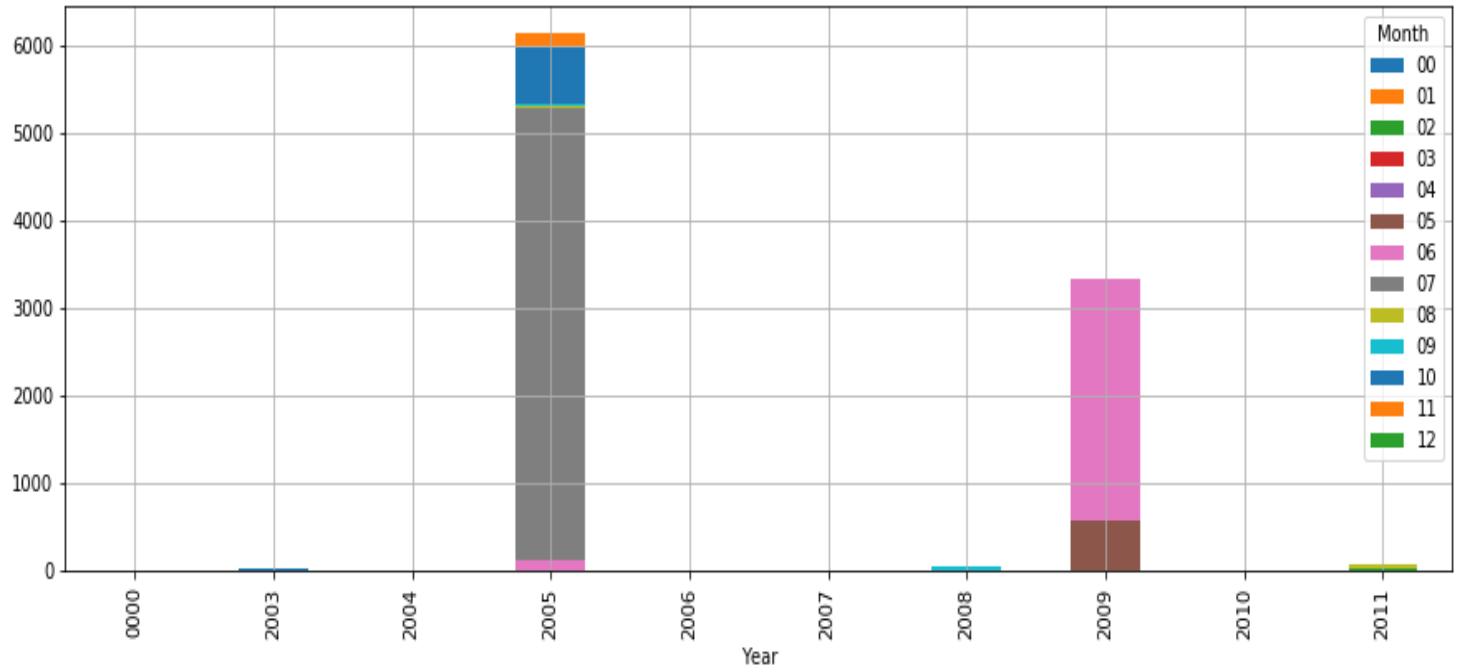
(Need axis altering)

A Case Study – The Titanic Project



- Keyword search of File names indicates on drive 04 only.

- [OVERLAY TITANIC ACTIVITY AND DISCUSS]



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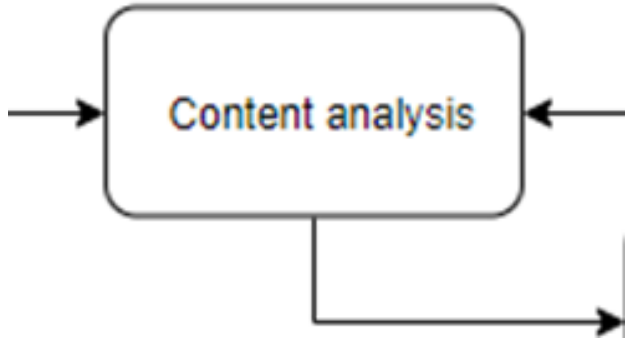
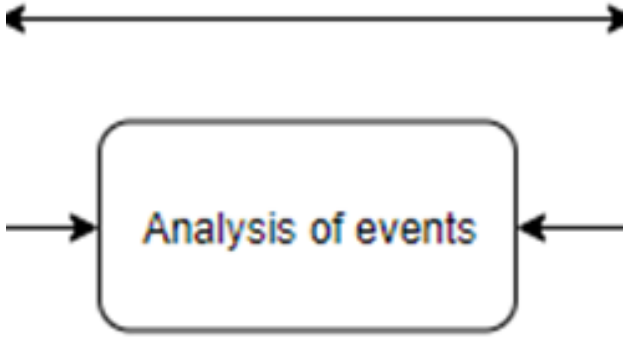


- File structure

- File types

A Case Study – The Titanic Project



- Comparison with complete timeline indicates that this was the primary but not sole focus of the time