

Digital Forensics at Stanford University Libraries

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Topics

- The Collections
- Forensics Lab
- AIMS (An Inter-Institutional Model for Stewardship)
- Hypatia software development
- Other efforts of note (training, data mining)

Collection Acquisitions in the 1990s

- Apple Computer Inc. records
- Douglas Engelbart papers
- Stephen Cabrinety collection



- By 2000, over 9,000 items of legacy computer media received as part of hybrid collections

And More Collections

- Stephen Jay Gould (documents)
- Keith Henson papers re: to Project Xanadu (applications)
- Robert Creeley (email)
- Peter Koch (design files)



Stephen Jay Gould

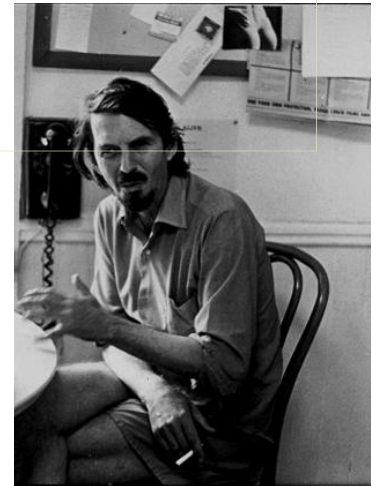


Peter Rutledge Koch papers

More collections, new challenges

Robert Creeley born-digital May 2011 addenda :

- 7 computers
- 3 zip drives
- 121 optical discs
- 422 3.5-inch floppy diskettes
- 1 Zip 250 USB Drive
- 1 Olympus Camedia CF/SmartMedia Reader
- 1 Olympus C-4000 Camedia Digital Camera & flash cards
- 1 20-gigabyte iPod



Robert Creeley

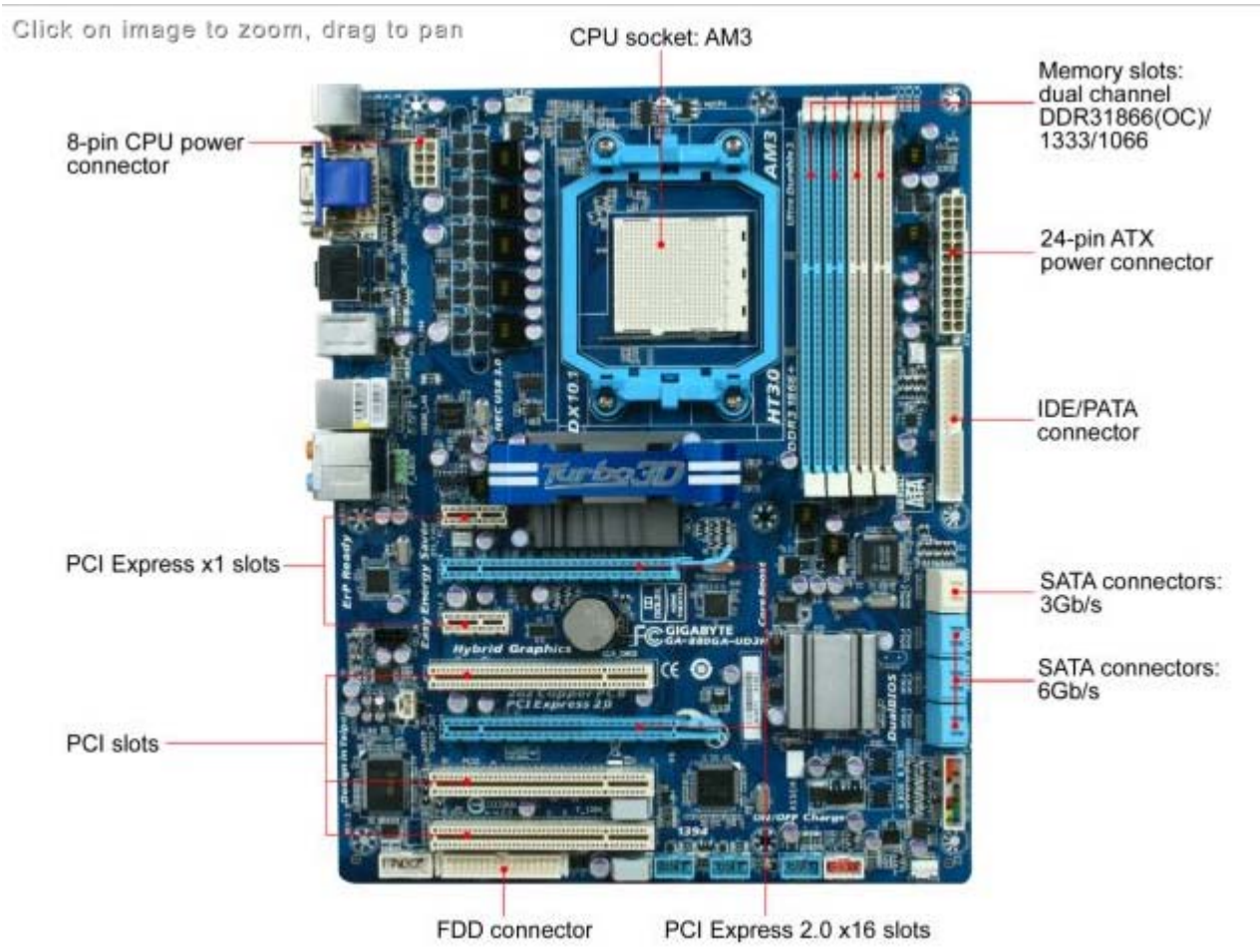
FRED (Forensic Recovery Evidence Device: Digital Intelligence)

Software: FTK suite (AccessData) - EnCase



Dear Peter,

Unfortunately we do not manufacture any motherboards now a days which can support the 5.25 floppy. The interface are different than 3.5 and they are becoming obsolete and are no longer available on the newer motherboards.





Capture Failure Statistics

- Stephen Jay Gould – 5 %
- Robert Creeley – 6 %
- Xanadu hard disk drives – 67%

AIMS Born-Digital Collections: An Inter-Institutional Model for Stewardship



born digital archives

The AIMS project, funded by The Andrew W. Mellon Foundation, represents a co-operative strategy among four partner institutions, to energize collection development in the area of born-digital papers, and to empower librarians and archivists in the management of born-digital assets. The four partners in the project led by the [University of Virginia](#) are [Stanford University](#), [University of Hull](#) and [Yale University](#).

[The Collections](#) [Documentation](#) [Links etc](#) [About Us](#)

Wednesday, 18 May 2011

AIMS: the UnConference

Aims
the UnConference

Not two full weeks into my new job as Digital Archivist at UVA on the AIMS grant, I rolled up my sleeves to facilitate and host an [unconference](#) with my fellow Digital Archivists. Our unconference would be two full days of discussions, demonstrations, lightning talks, and networking with digital archivists from around the globe. At first the thought was a little terrifying – I'm not even fully sure I know what this job is yet, how could I actually lead discussions on the salient topics? But my fears were baseless: all the unconference attendees were thoughtful, articulate, and lively participants. I learned much more from them than they probably did from me.

The unconference was held on the 13th and 14th of May at the Omni Hotel in Charlottesville. The [27 participants](#) represented libraries, archives, museums, and digital humanities centers across the US, Canada, and the United Kingdom. Despite the differences in our institutions, backgrounds, and training, we learned that we not only shared similar challenges, but also the same hopes for collaboration and innovation.

The first day started off with a round of lightning talks. Each participant had 5 minutes to present a topic, project, problem or idea that they were interested in talking about. The variety in the talks was remarkable to me, traversing the breadth and depth of all that can be thought of as "born-digital" and the many processes involved in managing it. The lightning talks were also great way to get an introduction to each participant as well as their perspective or the particular issues they were dealing with in their institution. A brief outline of each of the talks is available on the [AIMS Unconference Wiki](#).

[Read more >](#)

Posted by Gretchen Gueguen at 20:51 1 comments



University of Virginia



Yale University



Hull University



Stanford University

Funded by the Andrew W. Mellon Foundation

Hypatia

- Developed on Hydra technology stack:
 - Fedora
 - Solr
 - Blacklight
- Hypatia is a Hydra application for arranging, describing, and delivering born digital archival content
- Application under development – demo app by Oct. 2011

Hypatia

- Wiki -
<https://wiki.duraspace.org/display/HYPAT/Home>
- JIRA -
<https://jira.duraspace.org/browse/HYPAT>

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CM01

PID hypatia:fixture_xanadu_drive1

DESCRIPTION

Local Identifier CM01

Extent 1.0 computer media, hard drive

Located In Born-Digital Materials - Carton 11 - Computer disks / tapes

Digital Origin born digital

Processing Information The capacity of CM01 is 2049 MB and CM01.dd is the image file created by AccessData's FTK software. CM01.txt is the log for the imaging process; CM01.csv is the directory listing of the files in the image; CM01_1.jpg and CM01_2.jpg are the photograph images of the drive.

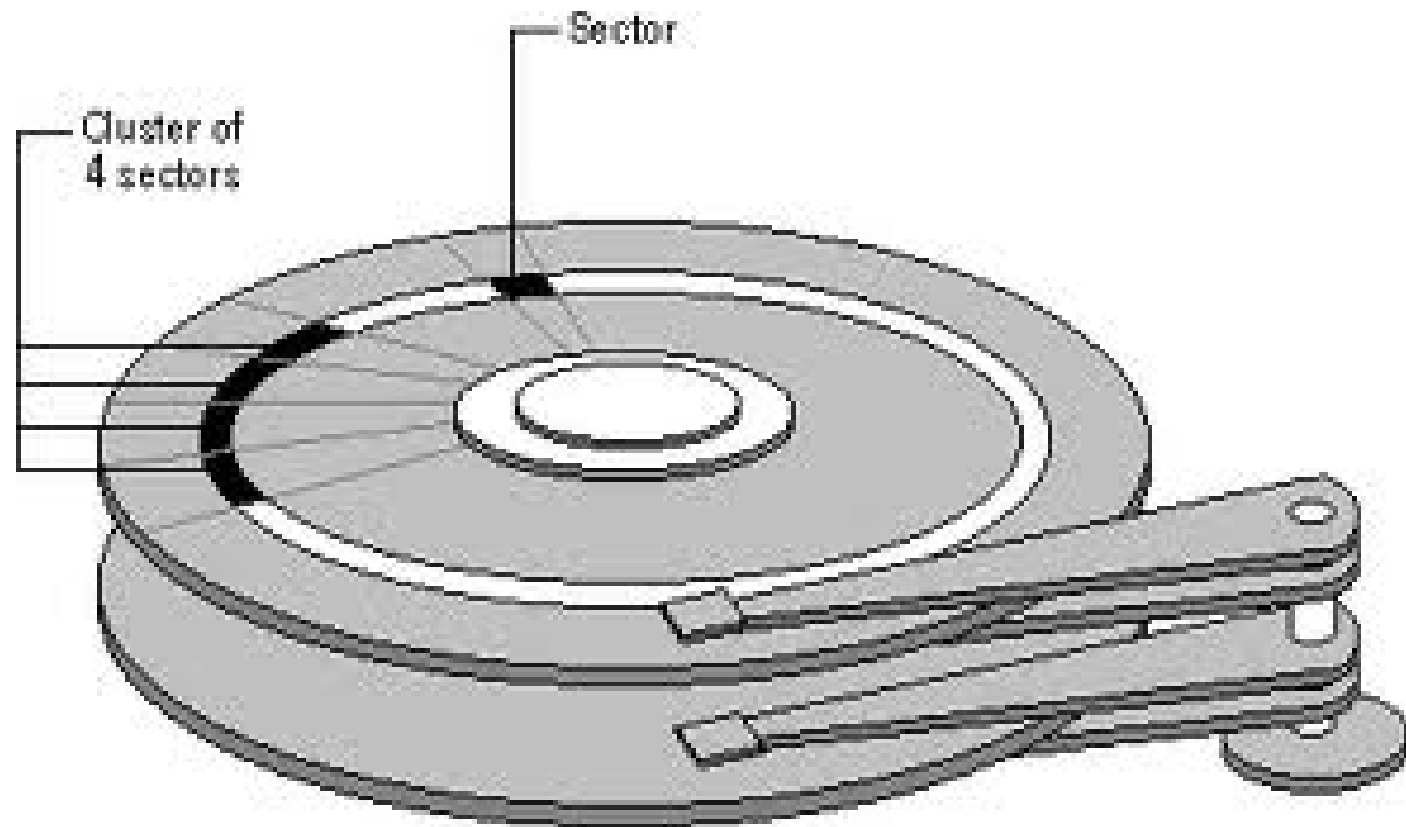
FILES

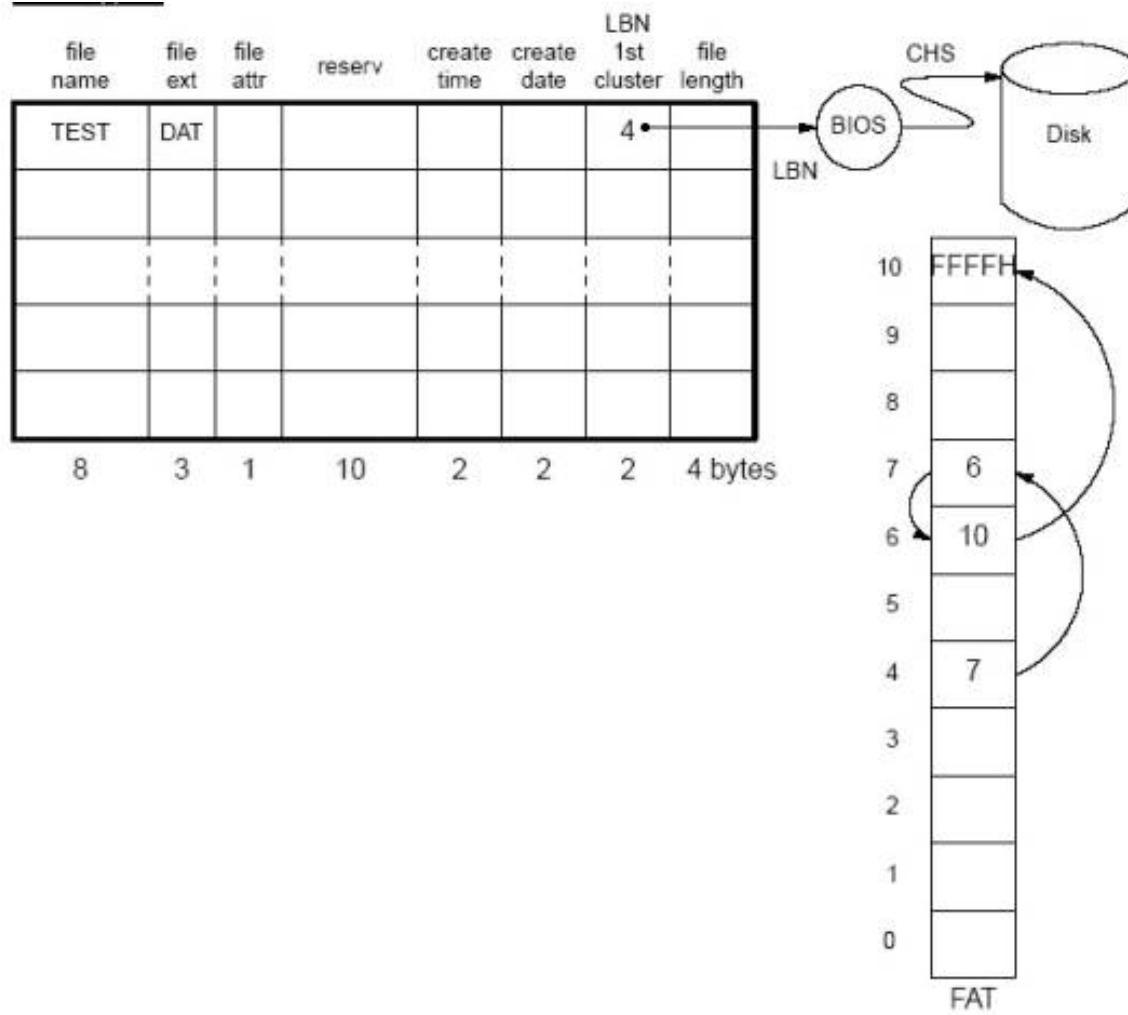
File	Size	Access
CM01.dd	1408	download
CM01.txt	1250	download
CM01.csv	10750	download

TECHNICAL INFO

Additional Work of Note

- Training of Stanford library staff in forensic / logical capture as well as use of FTK
- Visualization of born digital collections
 - Robert Creeley Email Network Graph showing connection between Robert Creeley and poet Gerard Malanga – Elijah Meeks
 - Data mining of sentiment in email archives - MUSE prototype software by Sudheendra Hangal, Computer Science PhD

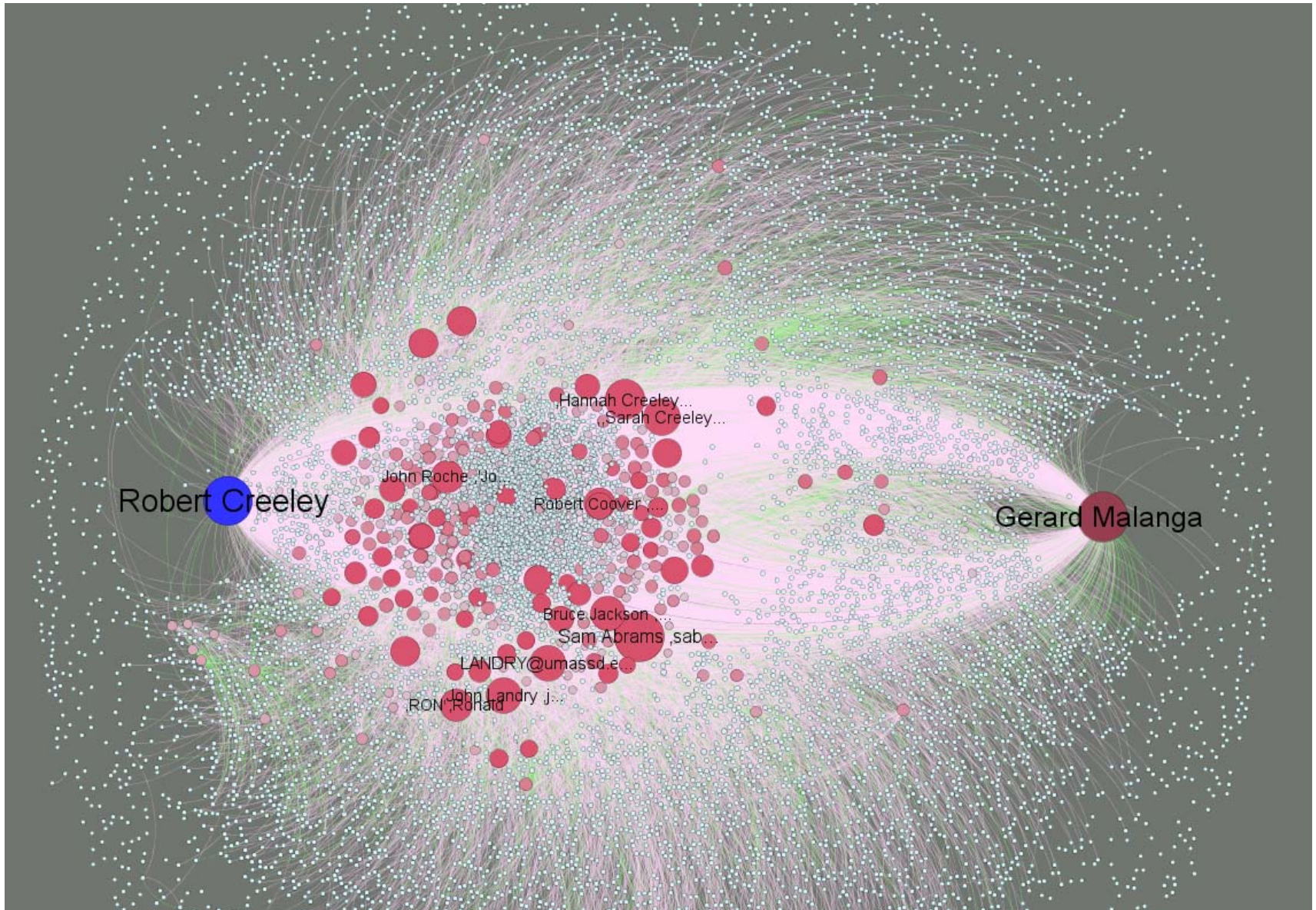




AccessData FTK

- Create New Case
- Technical Metadata Extracted by FTK
- View Files in “obsolete” File Formats
- View Image Files as Thumbnails
- Search for Restricted Files using Index / Pattern Search
- Flag Restricted Files as Privileged
- Change Column Settings to Include or Exclude Information
- Apply Filter to Items to be Displayed
- Arrange Files in Series / Subseries by Assigning Bookmarks
- See Files by Bookmarks
- Create and Assign Labels to Files
- View Files by Labels

Creeley's Email Network



Email Mining on Peter Koch's Emails

ORGANIZE YOUR GROUPS

You can drag, drop, clone and delete people, or merge, clone and delete entire groups. You can also give meaningful names to the groups. Colors rotate after 20 groups. terms on the next page.

REFRESH
CONTINUE

Super individuals

- Susan Filter
- Roberto G. Trujillo
- Robert Bringham
- Jonathan Gerkin
- Max Koch
-

Super groups

duke.collier+3
 Duke Collier
 Carolee Campbell
 Susan Filter
 Roberto G. Trujillo

susan+1
 Susan Filter
 Roberto G. Trujillo

akohs+57
 Anne Kohs
 Ann Whipple
 Tony Green
 Crispin Elsted
 Belinda Presser_FW
 Carolyn Fraser
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Email Mining on Peter Koch's Emails

