Understanding the Evolution of Users' Personal Information Management Practices

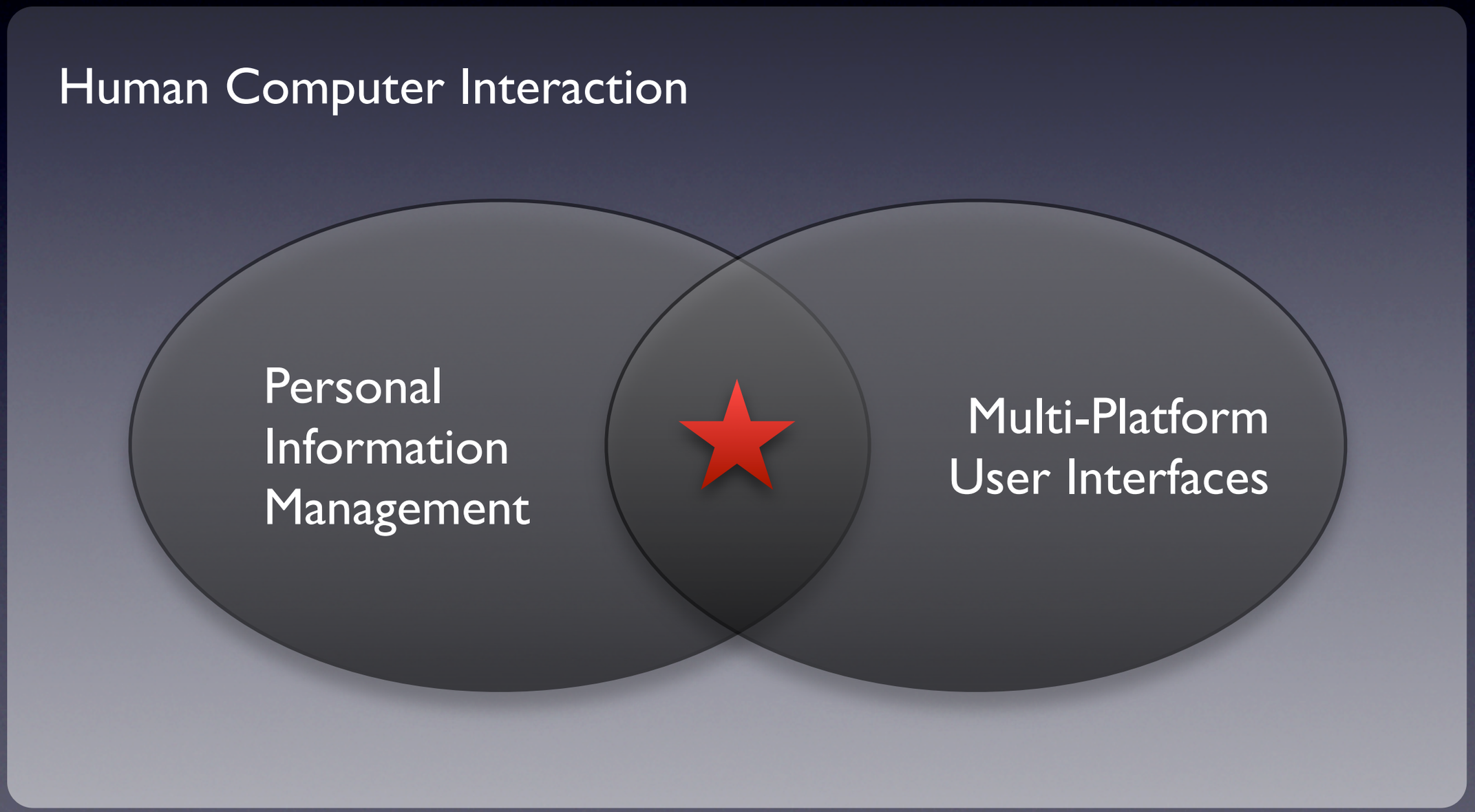
Manas Tungare

Advisor: Manuel Pérez Quiñones

chci center for human computer interaction

VirginiaTech

Research Area Overview



Personal Information Management

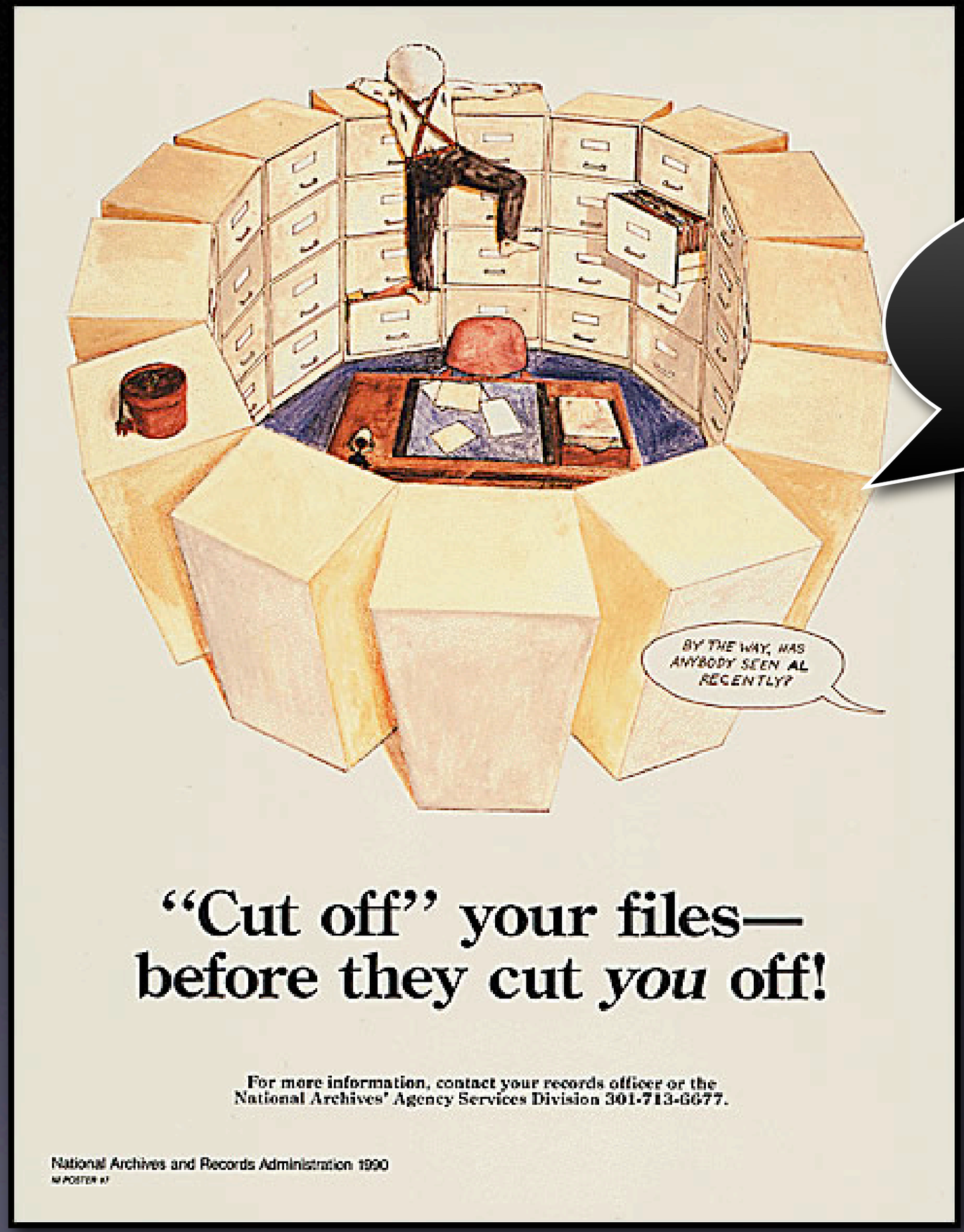
Information kept for personal use.
E.g. files, documents.

Information about a person kept by and under the control of others.
E.g. health information.

Information experienced by a person but outside her control.
E.g. books, websites browsed.

Information directed to a person.
E.g. email, IM.

[Jones 2006]



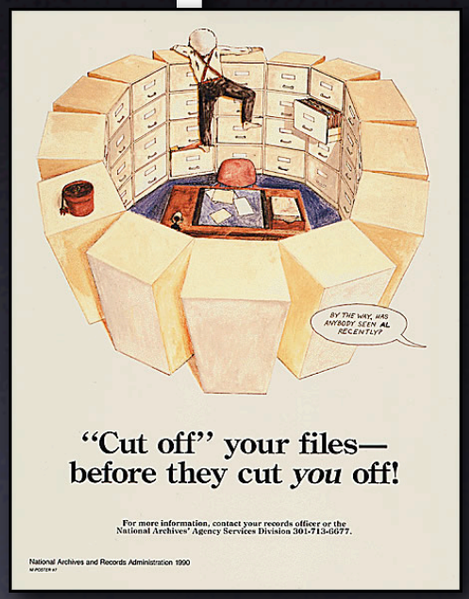
By the way, has anybody seen Al recently?

National Archives and Records Administration, archives.gov

Circa 1990 A.D.

1990 A.D. 1993 1995 1998-2001 2007

Mosaic Windows 95 .com ↑↓ Web 2.0



Information In Many Forms

[Jones 2002]

Mind-boggling Amounts

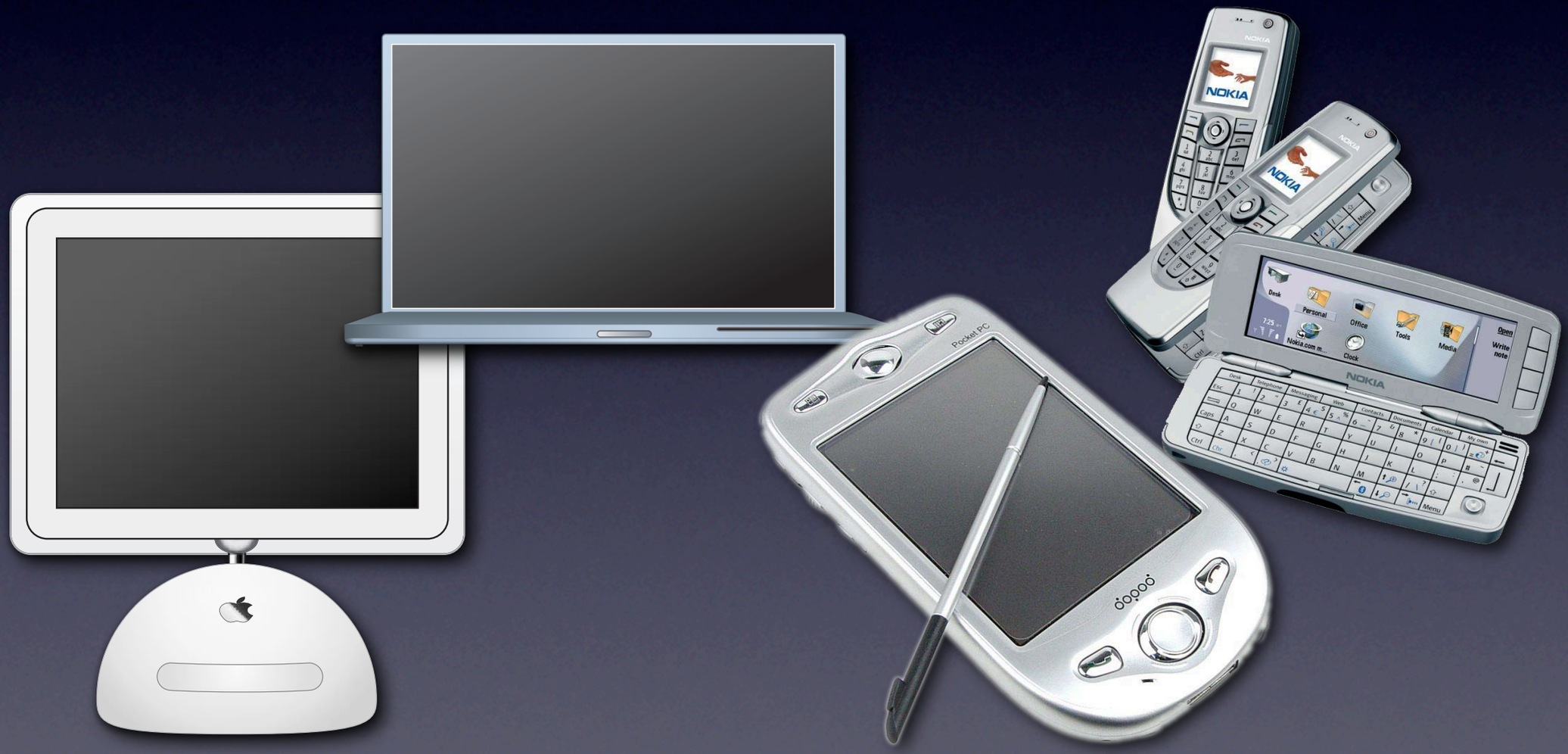
126 Email messages per day

53364 Messages in personal archive

123997 Files in home directory

Information is Fragmented

Across Devices



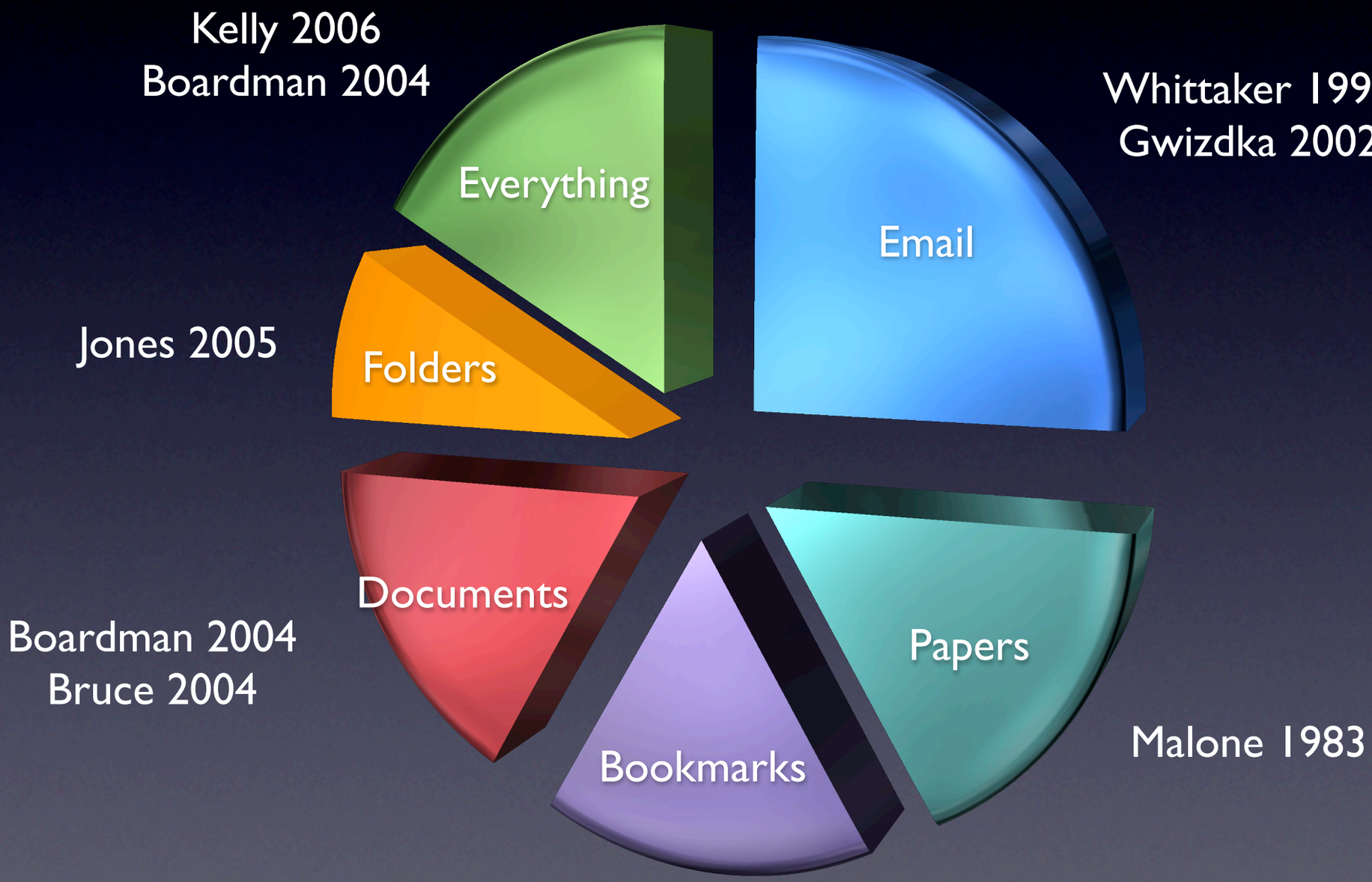
[Tungare 2006]

Information is Fragmented

Across Collections

[Boardman 2004]

Research is fragmented



[Jones 2006]

Why study PIM?

- Everybody does PIM
- Tools are not sufficient
  - A deeper understanding of personal information is needed
  - Custom strategies and workflows
- Approaches: browsing versus searching [Teevan 2004]
- Personalities: filers versus pilers [Malone 1983]

Studying PIM

- PIM is highly individualized
- People develop strategies to manage PI
- PIM strategies evolve over time
  - Transitions in life; new devices & tools
- PIM is highly contextual
  - Hence difficult to study

Study 1: PIM & Multiple Devices

- How do devices affect information flows?
- Inter-relationships between devices
  - Formation of groups of devices
- Attaining equilibrium in the information ecosystem
- Device failures

Study 1: PIM & Multiple Devices

- Survey + Interviews
- What activities do you perform on each device?
- What data do you keep on each device?
- What pairs of devices do you keep synchronized?
- What failures have you encountered?

Study 2: Evolution of PIM

- Natural transitions in life
  - High school to college
  - Grad school to industry
- A disturbance is noted when environment changes.
- How is equilibrium achieved?

What we expect to learn

- Are changes in PIM all the same in all cases?
  - New devices
  - Device/workflow failures
  - Changes in work environment
- What parameters affect PIM practice adoption?

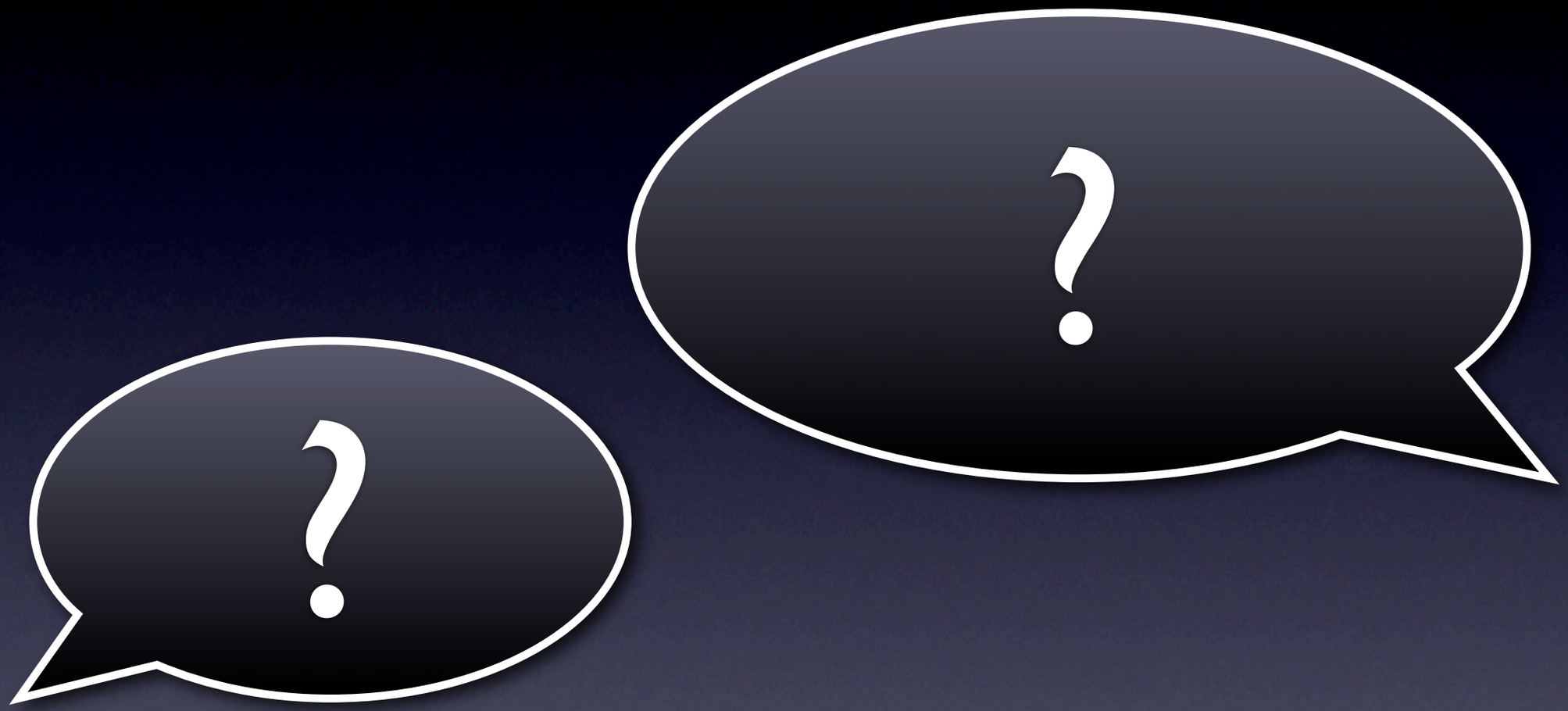
Analyzing survey data

- E.g. why do people use their address book on their phone, but not on their desktop?
- Hypothesis: Not all devices and not all collections are the same. Keeping, storing, organizing, & finding depend on type of data & device.
- Usage depends upon the combination of devices and collections, plus other factors.

Summary

- PIM is an interesting area in HCI where a deeper understanding would benefit lots of users.
- Open questions in PIM research include understanding how people use multiple devices for information management.
- Our studies will help answer these and design future devices and apps better.

Questions



manas.tungare.name/publications

manas@tungare.name