

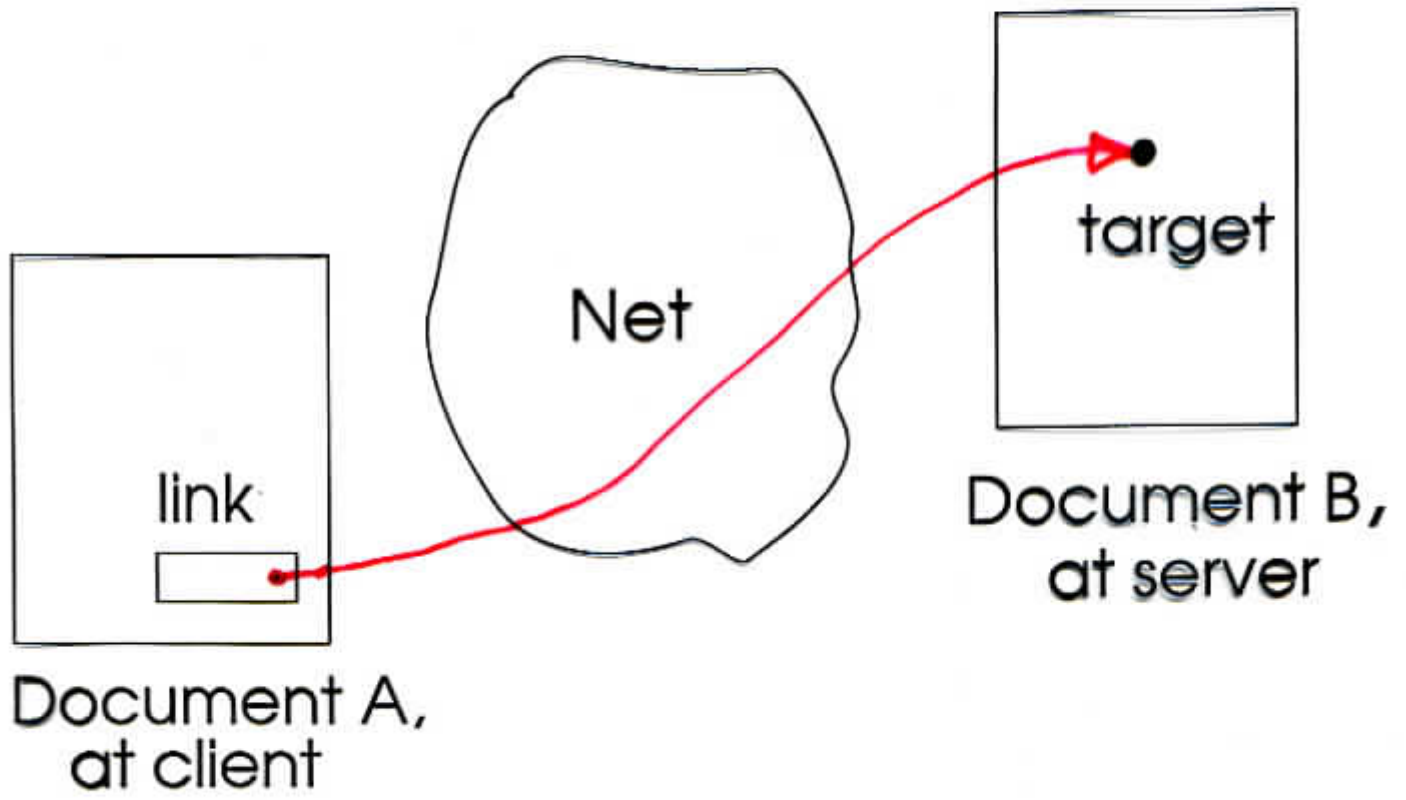
NEEDED: A SYSTEMATIC STRUCTURING PARADIGM FOR DISTRIBUTED DATA

Jerome H. Saltzer

Library 2000

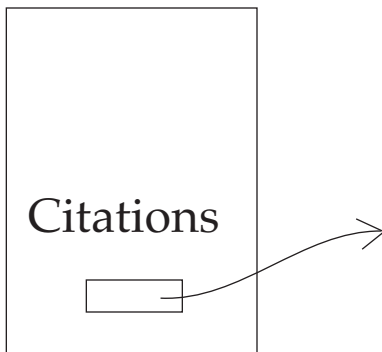
Massachusetts Institute of Technology

Links

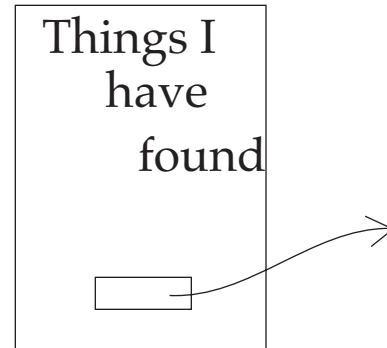


Uses for Links in a Library

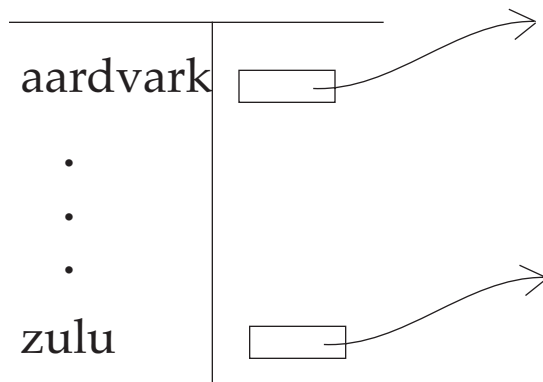
1. Formal paper



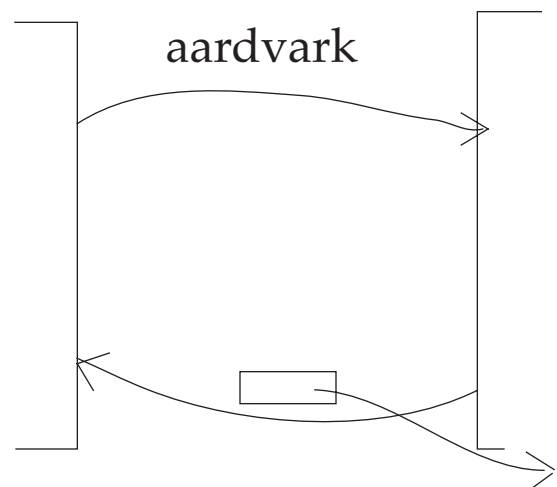
2. My notes



3. Search Service Index



4. Search Protocol



LINKS

Intellectually generated



Scholarly paper with citations

Survey paper with lots of citations

Bibliographical book

End of year journal index

Library card catalog

List of an author's works

New York Times list of name appearances

Reader's Guide, SCI, SSCI, RILA,

————— publication boundary —————

File containing the result of a search request

List of papers consulted by Einstein



Mechanically generated

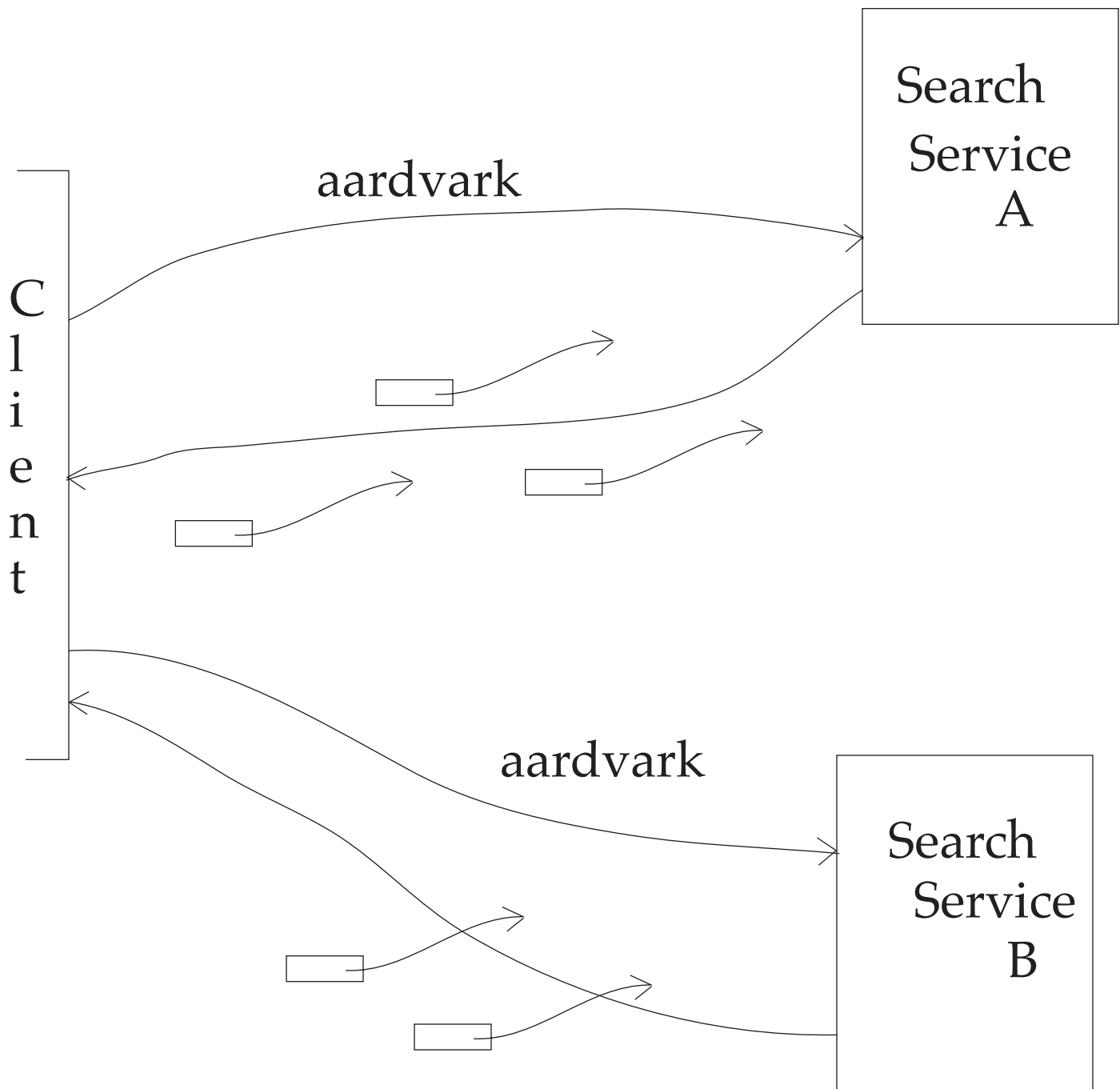
Why it is Hard: Persistence

Over a long-enough time,

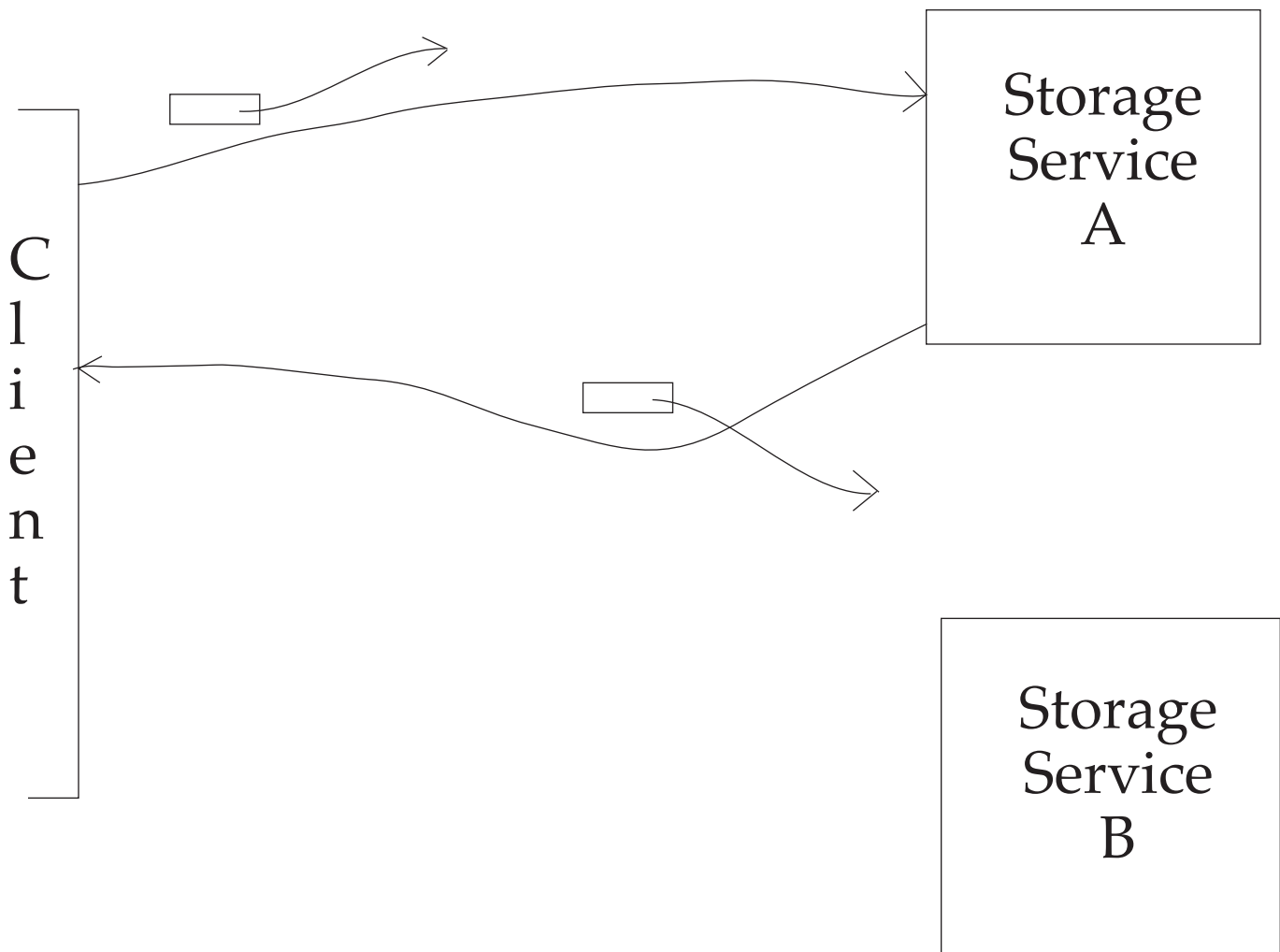
The storage service will
upgrade,
relocate,
merge, and
reorganize.

The document will
be updated or superseded,
be withdrawn,
be lost and restored,
become available from a
competitive service, and
be indexed in many places

Why it is Hard: Deduplication



Why it is Hard: Forwarding



Who is Thinking about it:

Ted Nelson

Xanadu

Brewster Kahle

WAIS

Tim Berners-Lee

World-Wide Web

Cliff Lynch

CNI

Conclusion

- There is an opportunity here for a contribution from the systems community.