

APR 17 1997



WORKSHOP IN NEW HYPERSTRUCTURE

Second session.

(First was a video and discussion without TN.)

/blocks= mostly added 17.04-20

THE HISTORY OF COMPUTERS

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1945
8 inventors

(especially as we see it in the Xerox project)

1955
TN start serious note-taking
World's first rock musical - Nov 57
TN's first movie

1960
Xerox paradigm

Ted enters field -
HText, links, transclusion

1965

Xerox PARC first personal computer
1975 S-100 Bus
Apple

PARC interface

TN speaks at PARC, 1972

1979: 'Swarthmore Summer'
TN, Roger Gregory, Mark Miller, Stuart Green, Roland King & ...

NEW TECH BASIS

1981 IBM PC

design of XU

1985 Mac - Media Lab
Mac saved by Adobe
H "desktop publishing"

COMPLETION OF XANXU 88.1

FUNDING BY AUTODESK INC.
MARK'S BIG MISTAKE
TN was not technically involved.
REDESIGN

1995

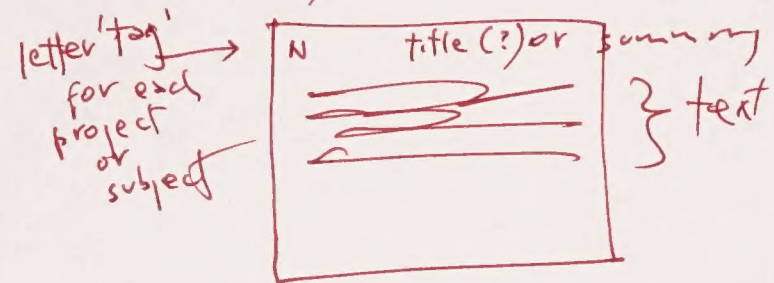
000 CHAOS

WEB

Ted turns out to be inside-out microproject, theory of microproject

HISTORY OF XANADU CONCEPT

1. Note-taking systems



EXPECTATION OF NEW SUBJECTS
AND NEW TERMINOLOGY.

Humpty Dumpty rule.

~~What if one card be~~

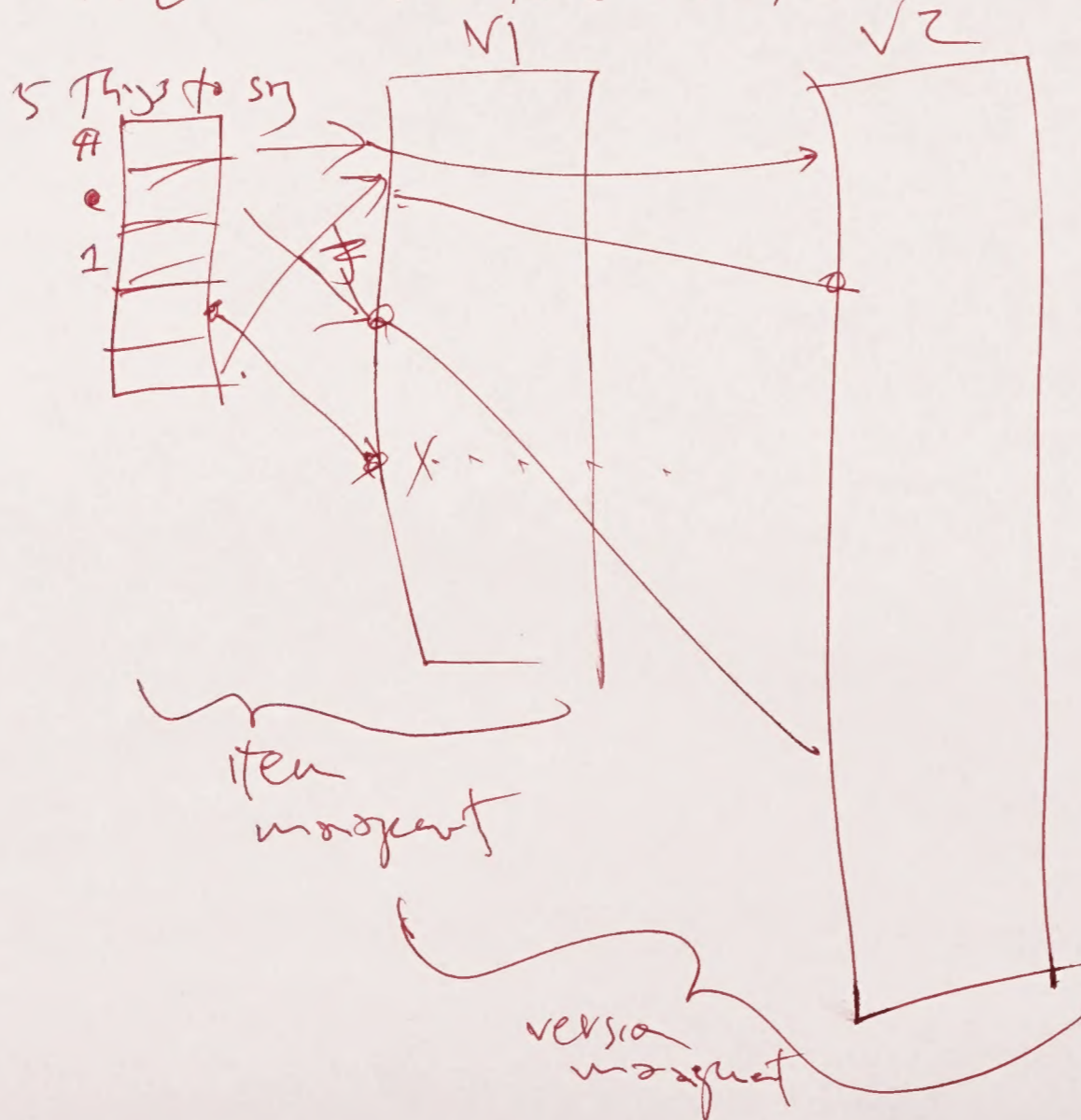
USES OF THIS.

- A. HELPING ME REMEMBER. The next idea is formulated more easily.
- B. PROJECTS. Writings plays columns FROM THE CARDS.
This prevents "Writer's Block."

MOLTEN THOUGHT: text systems and the Nature of Writing

for technical people to understand nature of writing.

VERSION MANAGEMENT ITEM MANAGEMENT



INTERCOMPARE,
CONSIDER
ALTERNATIVES

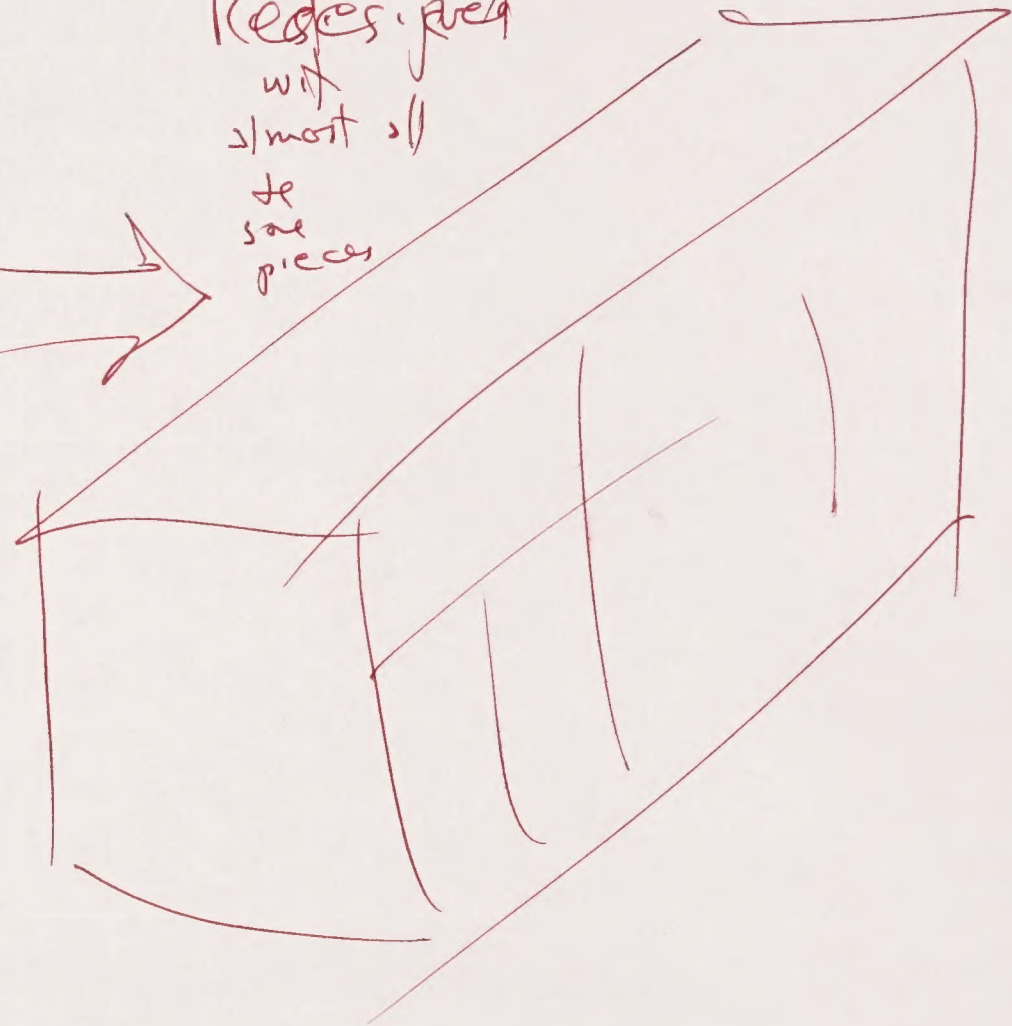
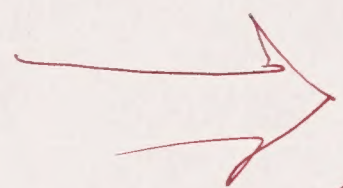
VERSION MANAGEMENT IN ARCHITECTURE = an example.

Charles & Ray Eames, designers. HOUSE IN L.A.

Original design



Redesigned
with
almost all
of
same
pieces



They decided their first design
would spoil the land,
so they redesigned it
completely —

WRITING IS A ~~DESIGN~~
KIND OF DESIGN.

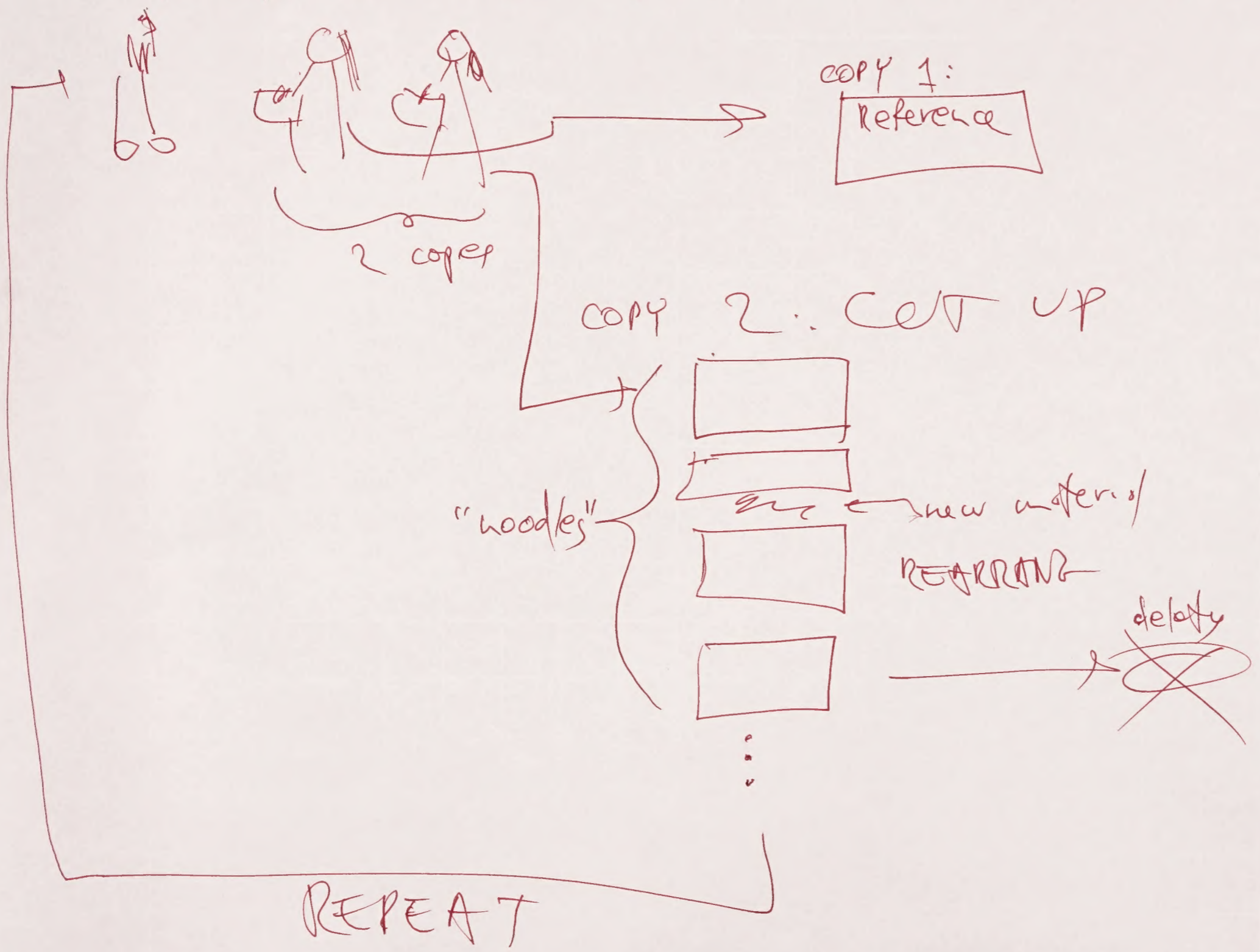


(rest) overall structure
from ideas
of pieces.

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TOLSTOY ~~NOODLES~~ NOODLES.

The system many people invent independently,
"Yasunaga & Polyan" (sic)



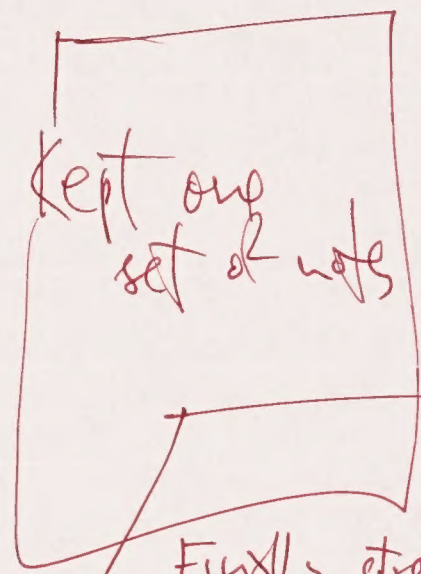
DRAFT:
 combination of
 old &
 new material

"Fair draft"
 author's
 clean copy

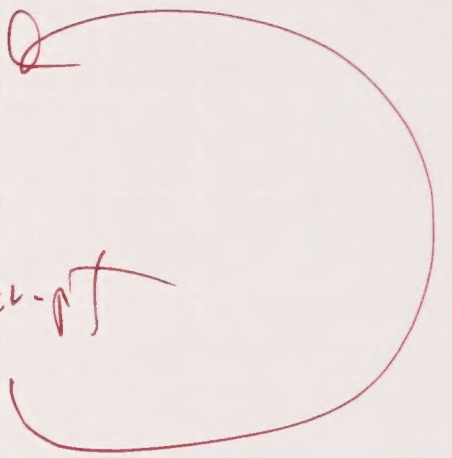


Everybody re-invent this method.

Henry David Thoreau.



Copied up manuscript

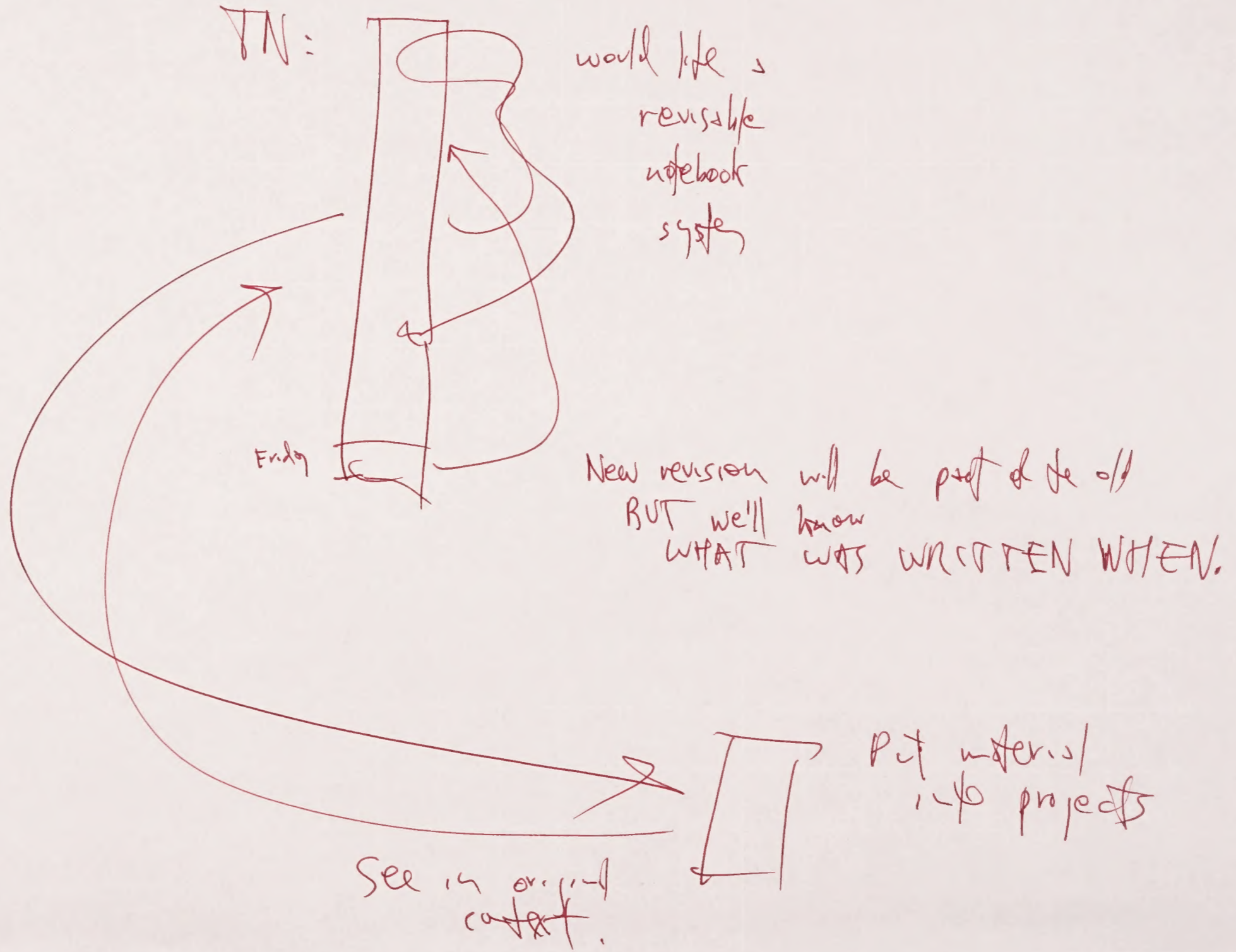


Finally started copying up original notes

R
P
B

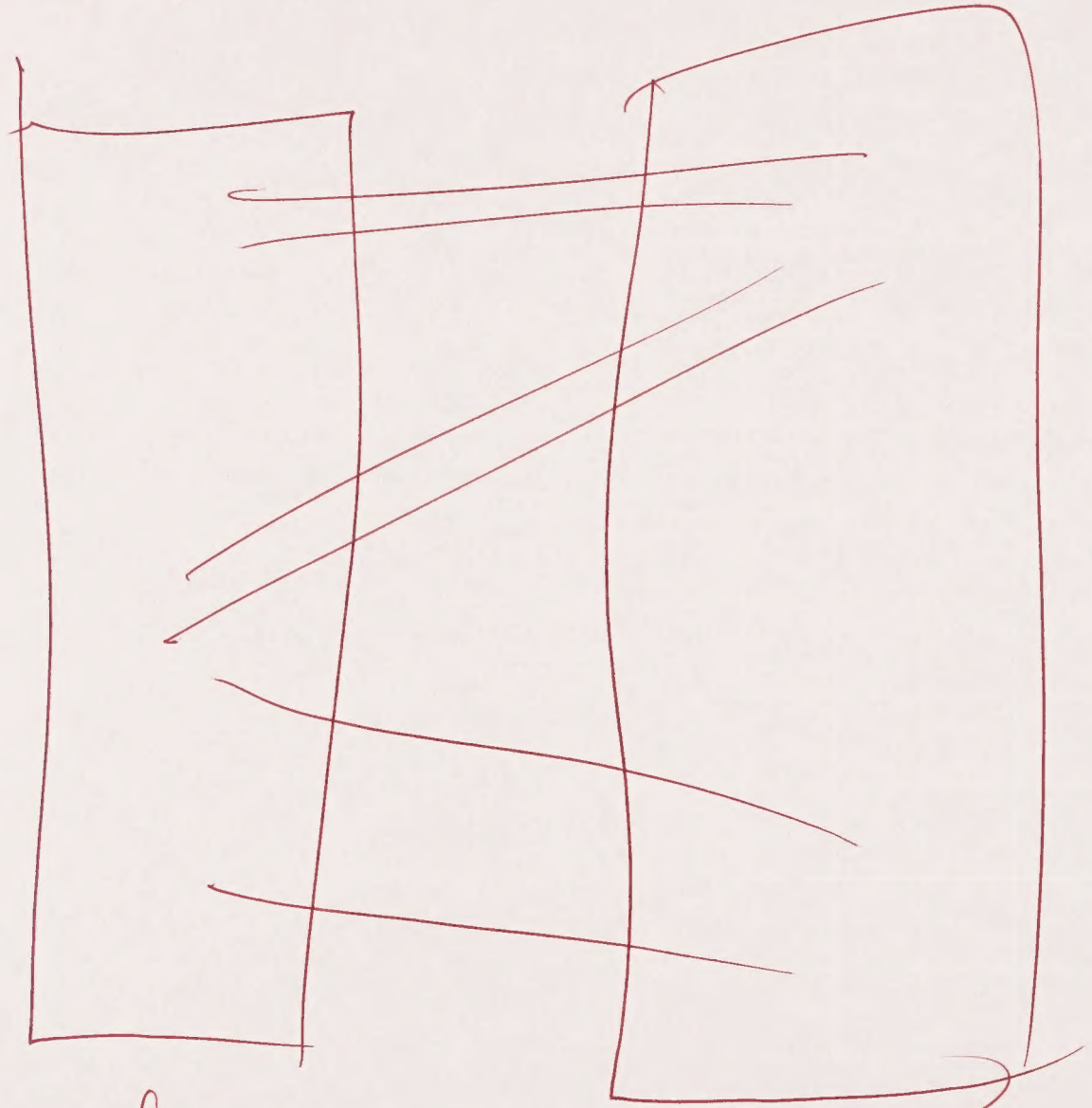
NOTEBOOK APPROACH.

Individuals
Laboratories (es Bell) → NO ^{BACK-}CHANGES.



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2. INTERCOMPARISON



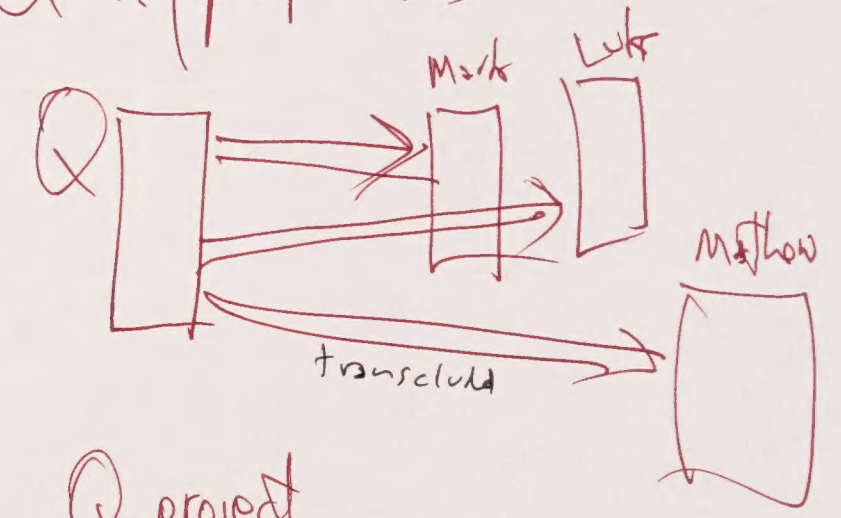
see and compare the differences.

for example, the hypothetical ancient Christian text called



Luke }
Matthew }
Mark } 3 books of Bible very close to each other.

Q hypothesis =

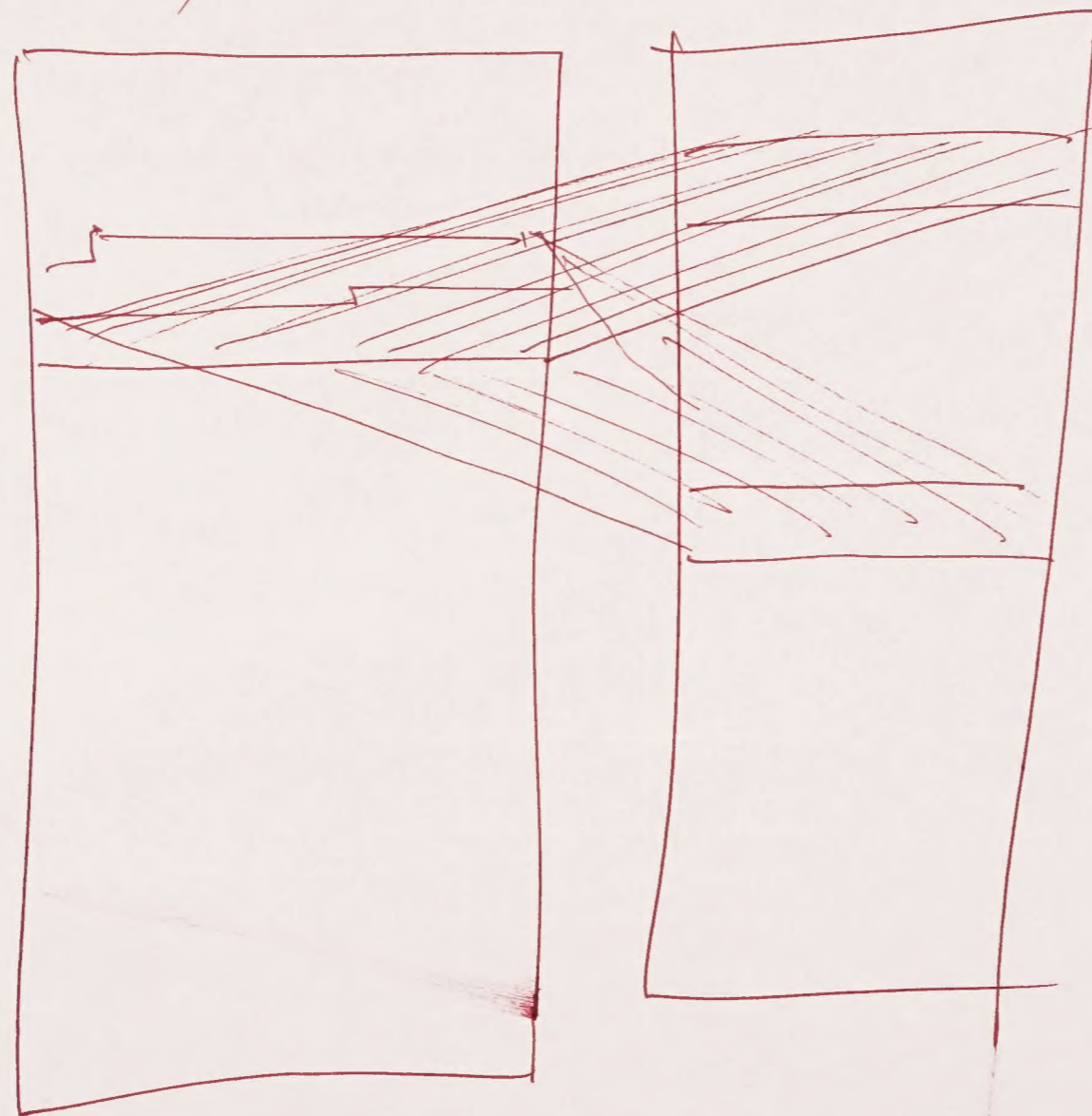


Q project rebuilds this hypothetical document.

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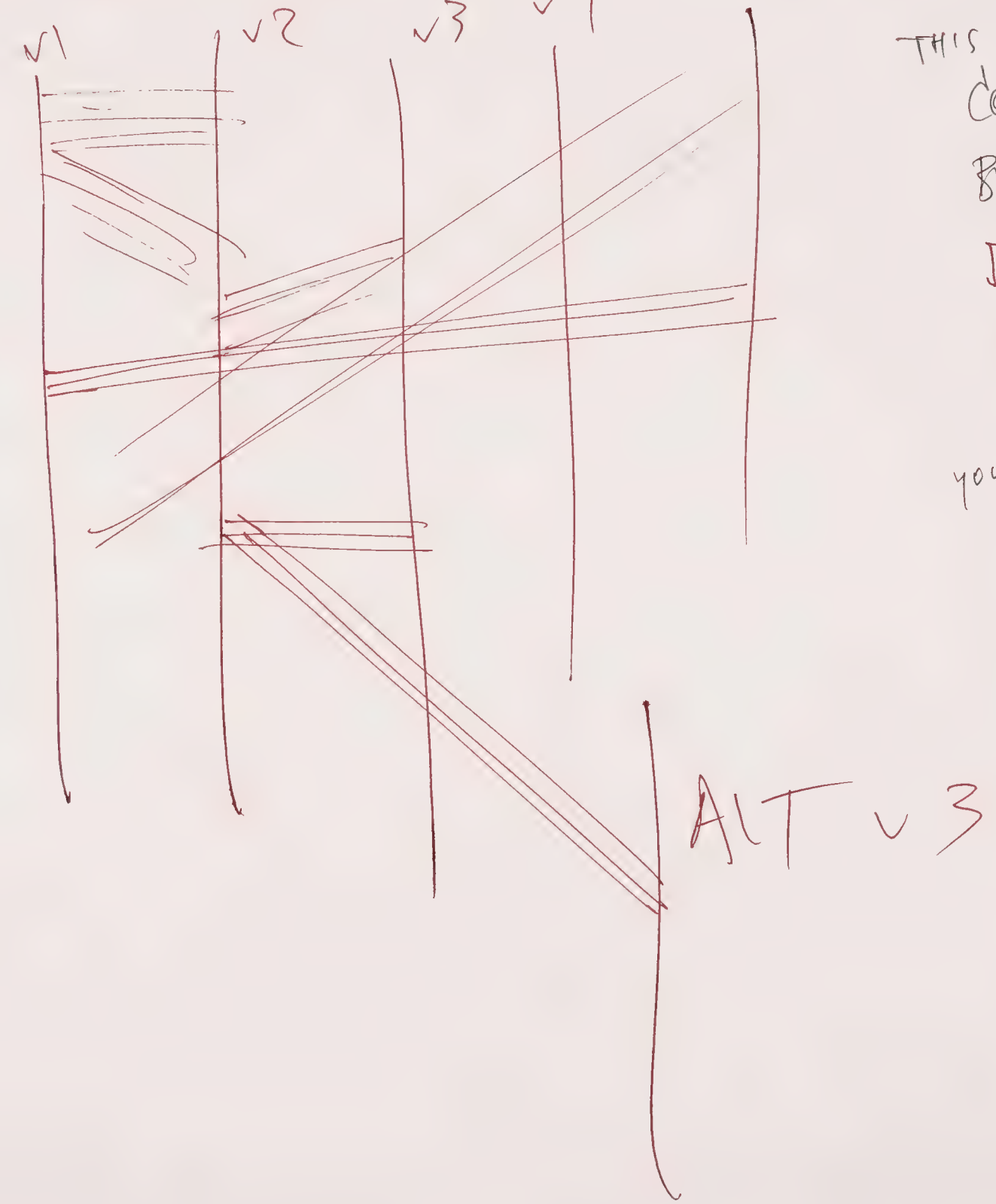
Intercompany VERSIONS.



A visualization for

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Multiple versions of linear text



THIS PICTURE
 COULD BE HARD TO UNDERSTAND —
 BUT=
 If you compare
 the relations up & down
 in visibility (brighter and
 darker)
 you can
 see the relations
 you prefer to see

MULTIPLE VERSIONING
IS based on

TRYING TO OPTIMIZE DESIGN

DIFFERENT VERSIONS FOR
DIFFERENT USES

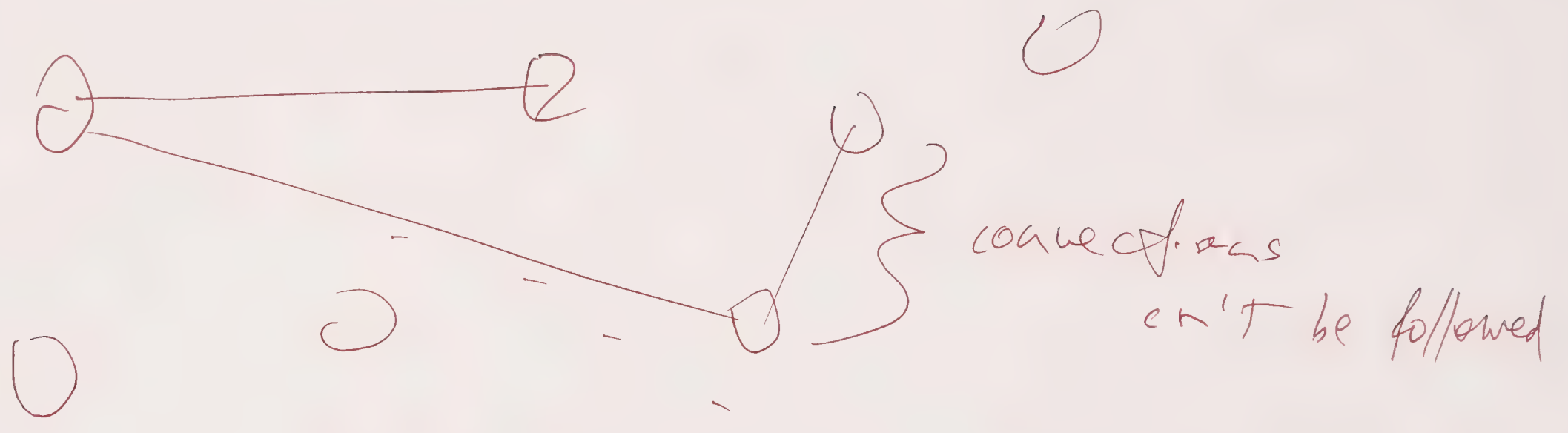
TRYING TO SEE

THE WHOLE
AND DETAILS

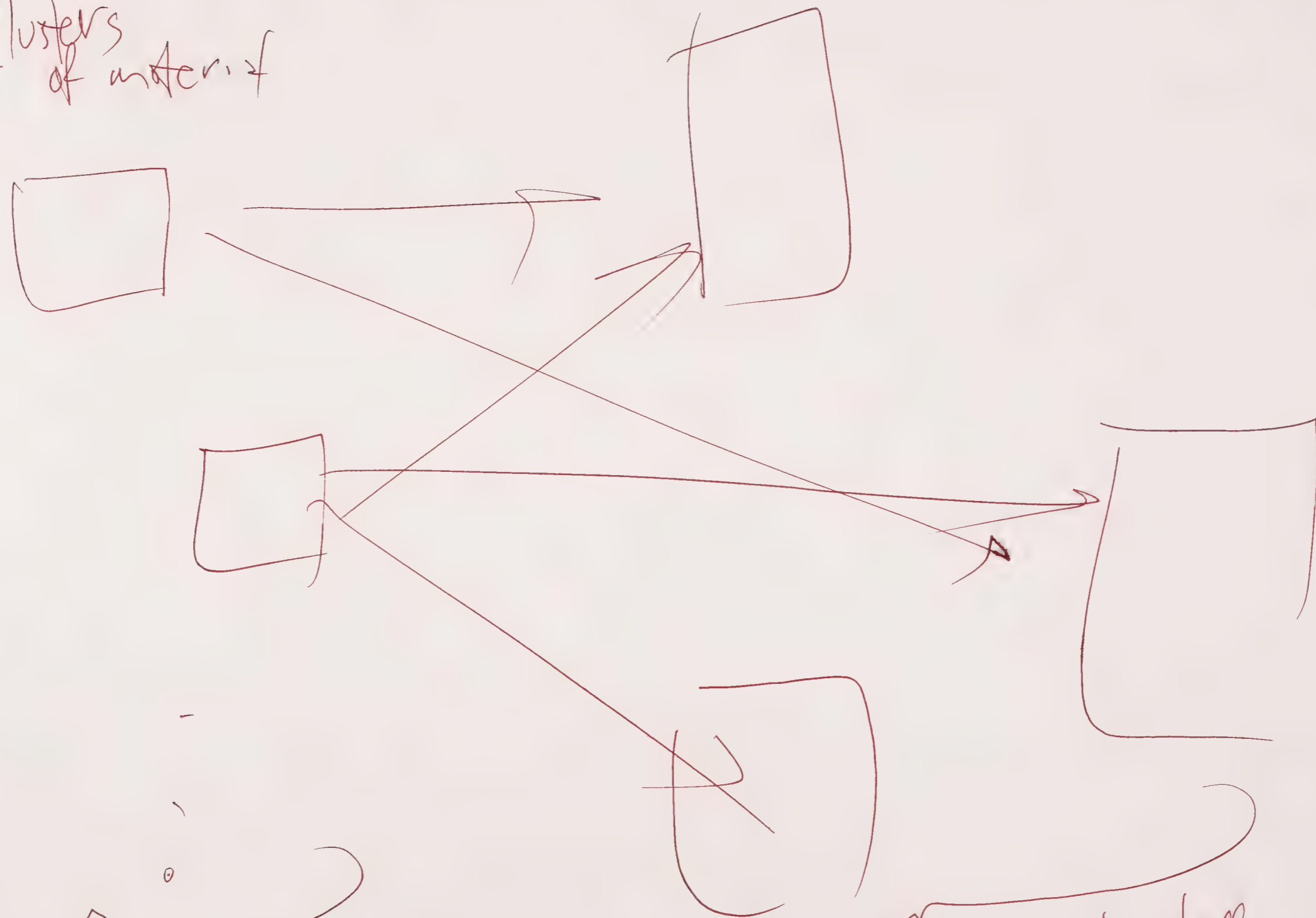
SIMULTANEOUSLY

RE-USE^v ACROSS PROJECTS
of some materials

THOUGHTS ^{ARE} LOST IN WP



Clusters
of material

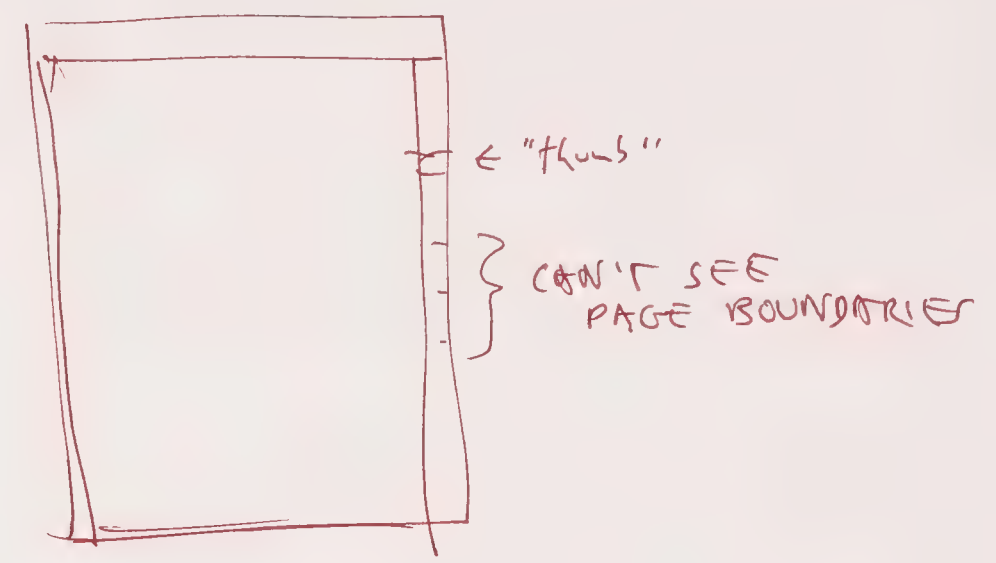


able to keep text parts
together

feedy into keep documents.

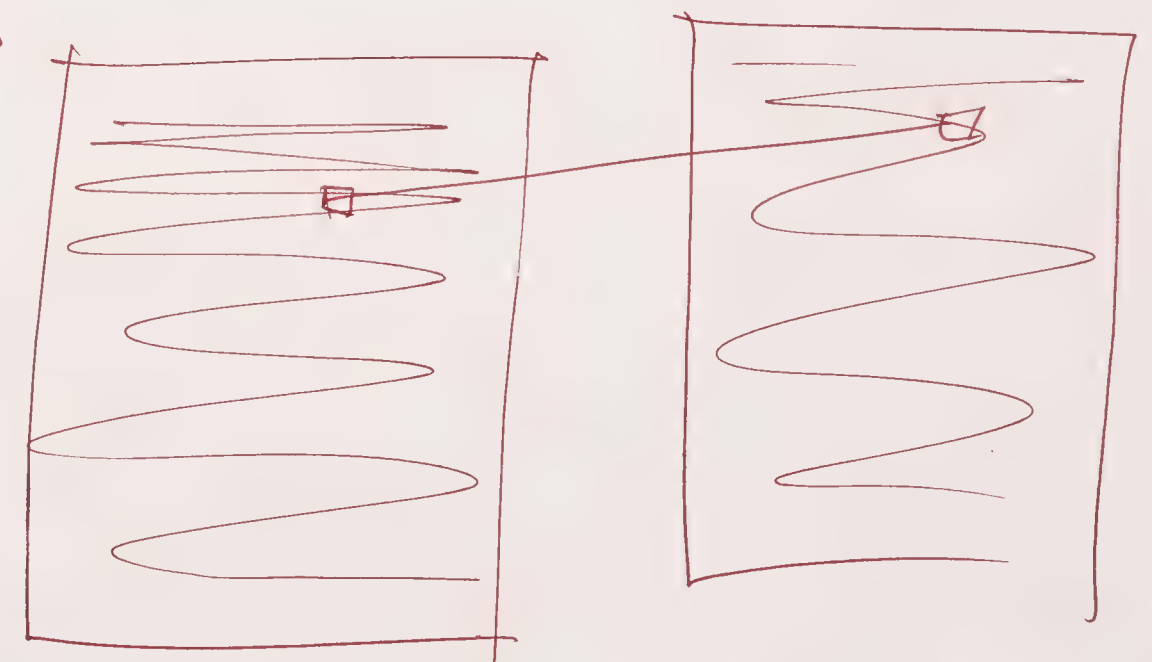
3. KEY VISUALIZATION: TRANSPARENT WINDOWS

Xerox PARC windows

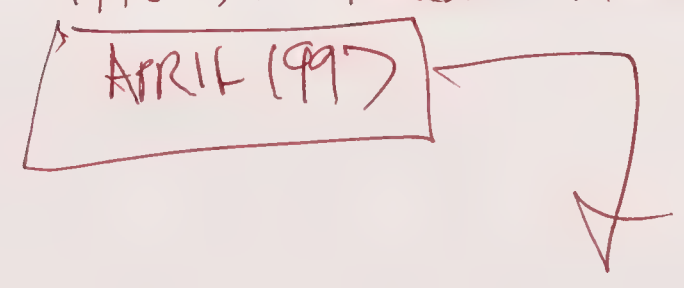


transparent windows
~~Nelson-Windows~~

first proposed in print by JN
about 1969?



1992? 3? Professor Tolkachov (Russia) SHOWED IT TO ME IN HYPERCARD ON THE MAC.



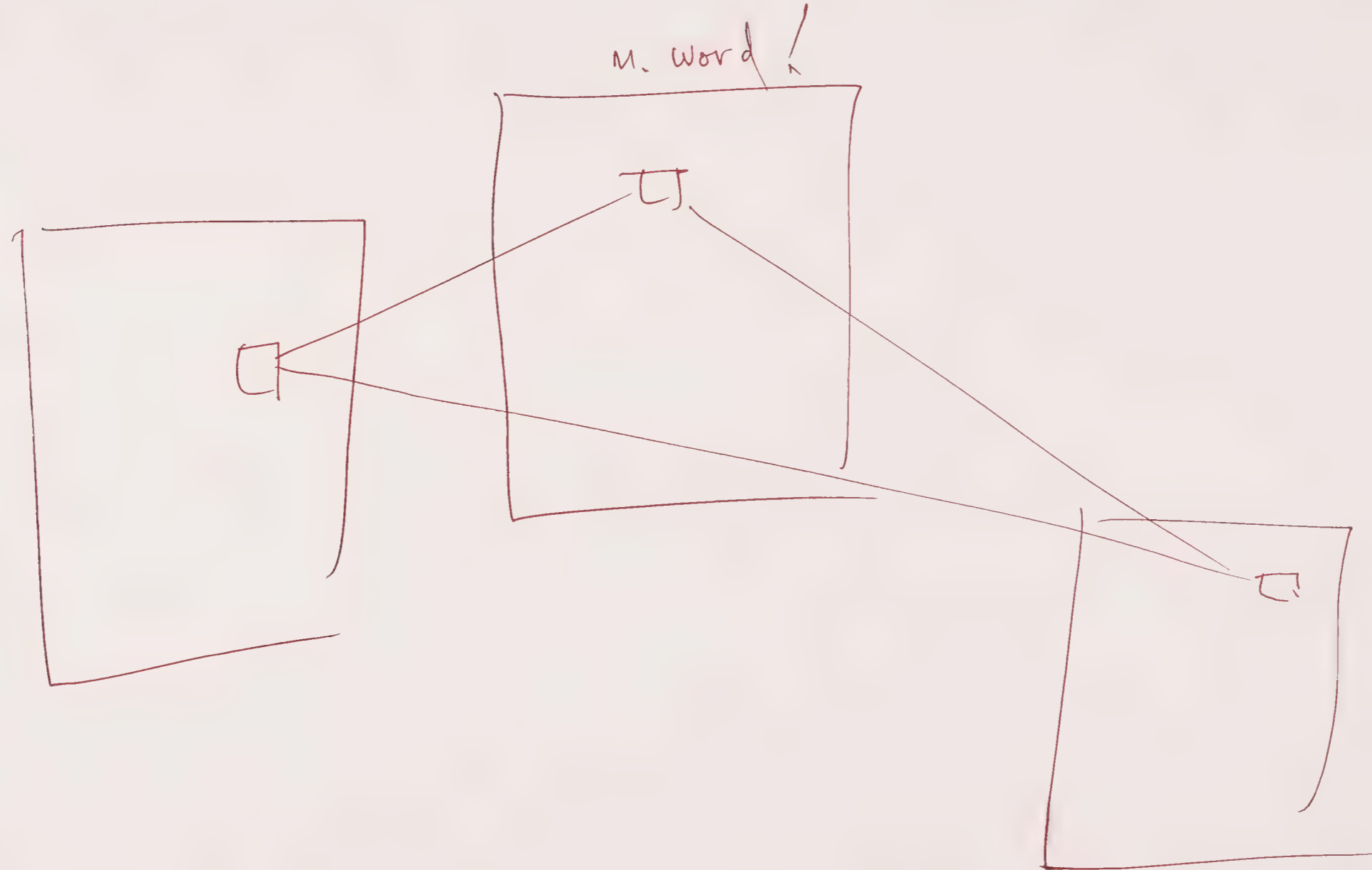
Finally, this has been implemented by

Jan Hesth of Microcosm Project, Southampton U.

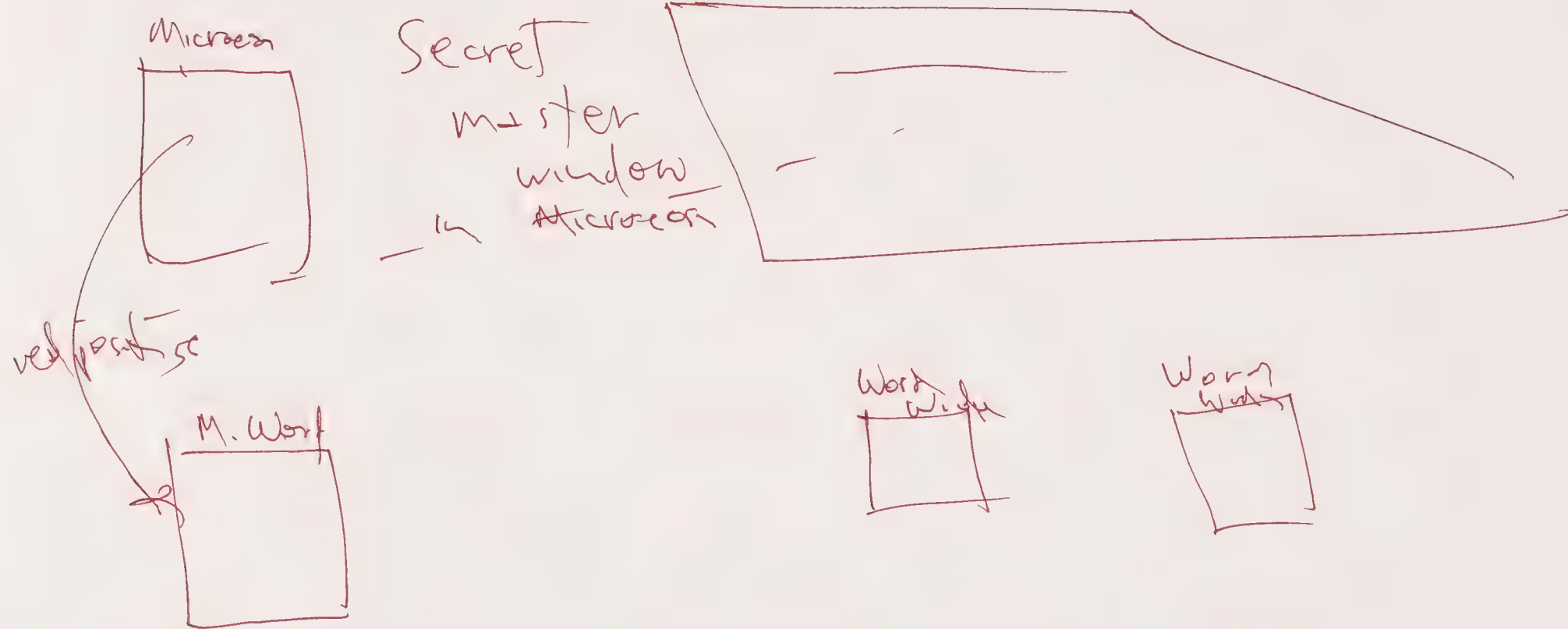
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LAST WEEK -

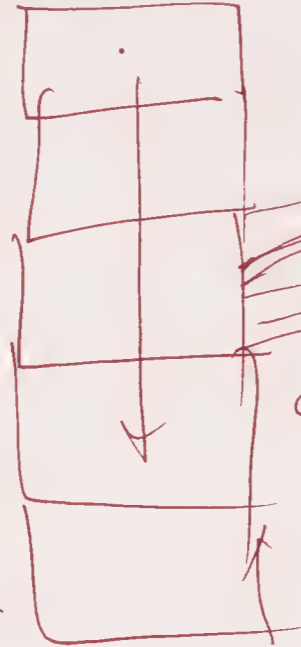


How it works _____



Sequential format
list of pieces

length = N



characters
in format

D1

Data of D1

original byte
in frozen
data

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Xanadu model:

FROZEN DATA



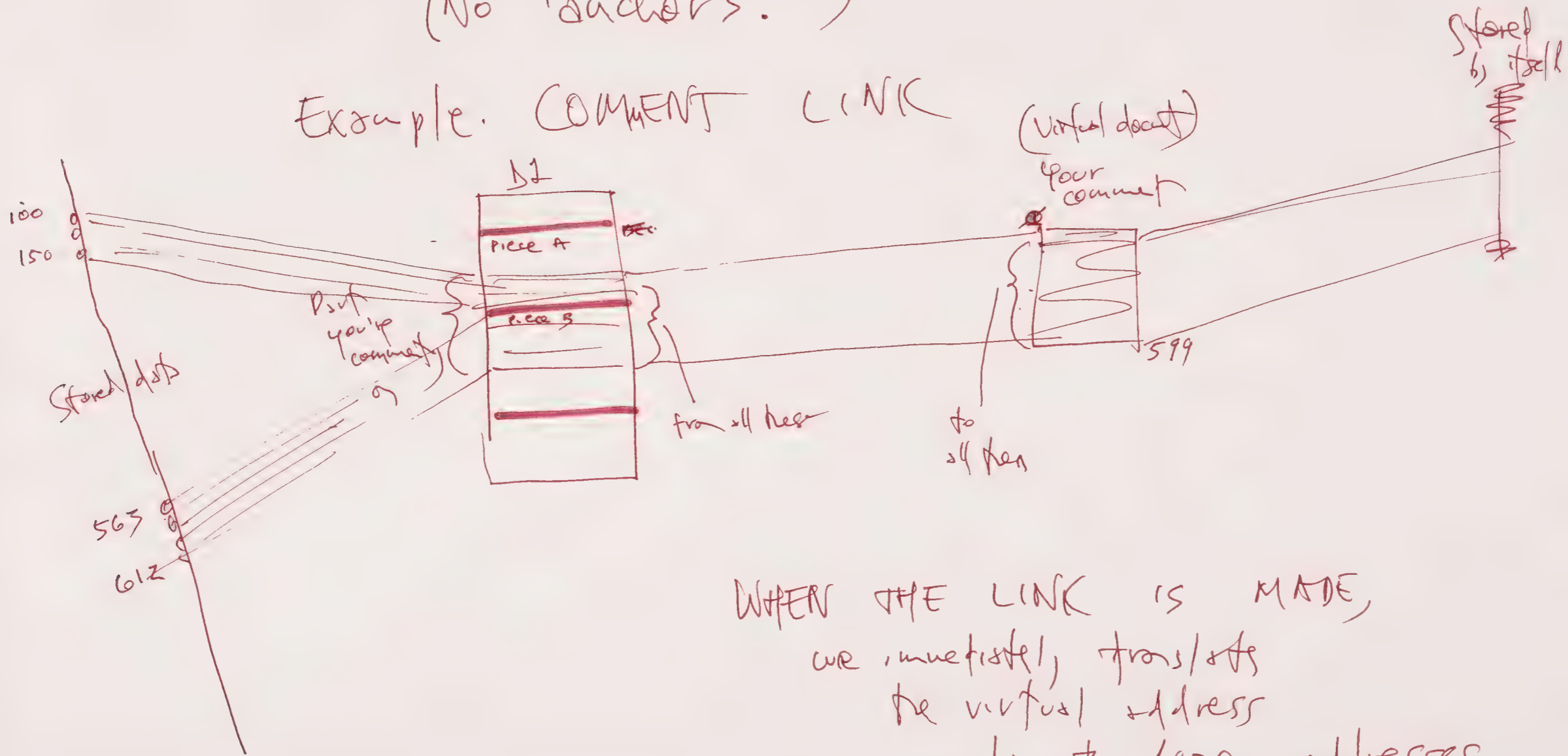
Append \rightarrow (-rest-only) file
with stable addresser



All the algorithms
are manipulations of these addresses.

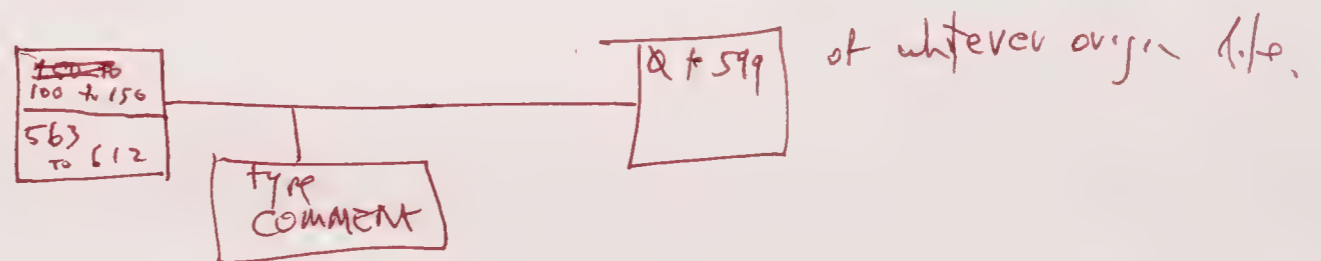
LINK IS BETWEEN DATA ELEMENTS (No "anchors.")

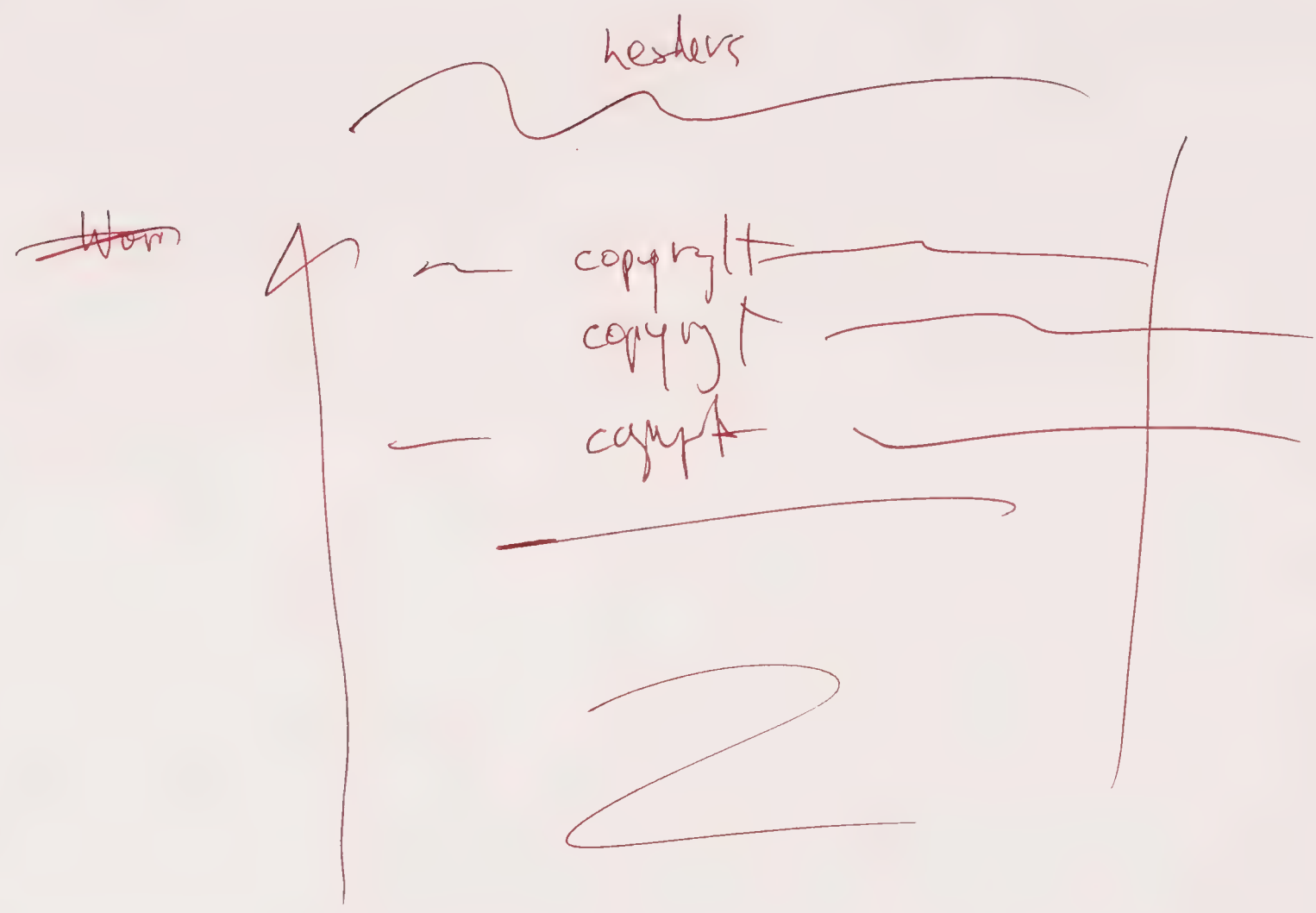
Example. COMMENT LINK



WHEN THE LINK IS MADE,
we immediately translate
the virtual address
to the frozen addresses.

Result:





New ways of
 visualizing text =
 for instance,
 rapid scrolling
 with some
 of messaget
 particular word
 in the same position.

OBJECTIVES:

Links & Transclusions for simple text documents,
NO FONTS.
[Esp EMAIL.]

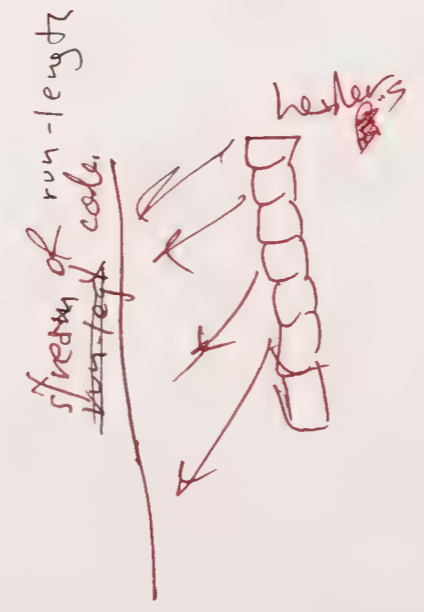
2. Extend the same algorithms to AUDIO.



(3. Fax.)



parallel format



Desirable

PRODUCTS of our workshop.

Prep take data and put in streaming format.

Eg {

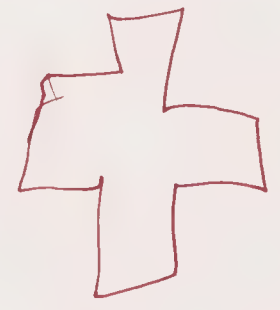
- TAKE ALL ~~EMAILS~~ EMAILS
- not coherent
- in chronological order
- THROW OUT DUPLICATES

Control {

- Rearrange
- Insert
- "Delete"

} "virt. document"

Make Follow } { link transclusion



Some visualization →

Extras



HTML Compiler

Hypertext search

Translating text versions from other software into OSMIC.

TN

Get rid of old
storage & presentations



Go to
PURE
STRUCTURE
OF IDEAS

IGNORE ALL
PRECEDENT

PARC

Map all information
to ancient
information
packages:

- cards
- folders
- icons
- etc.

Paper is where you put an idea
and consider it.

↓
Better & richer
1 paper:
better & richer expression of ideas.

I believe the pure structure of text should be

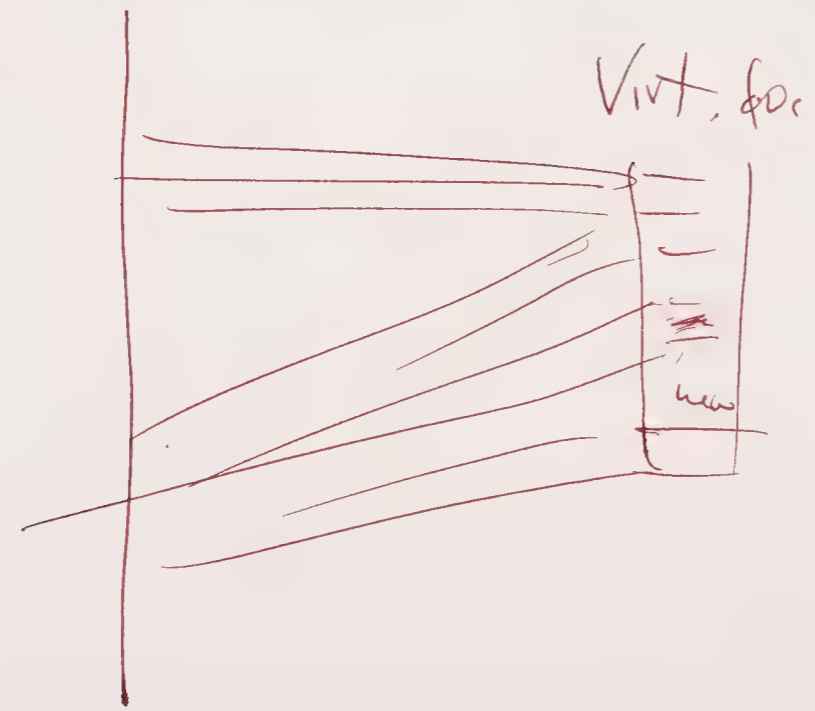
VIRTUAL DOCUMENTS

with

SIDEWAYS ACCESS

to original content
and to other versions.

Horizontal scroll



Ordinary



← scroll

OUR E-MAIL ADDRESSES =

t95129ku@sfc.keio.ac.jp
Ken'ichi Unno.

baseman@sfc.wide.ad.jp

Shu Nakamae

Also = Kei Kawai kevo@sfc.wide.ad.jp

Ted Nelson ted@xanadu.net

Yukihiko Yoshida t93502yy@sfc.keio.ac.jp

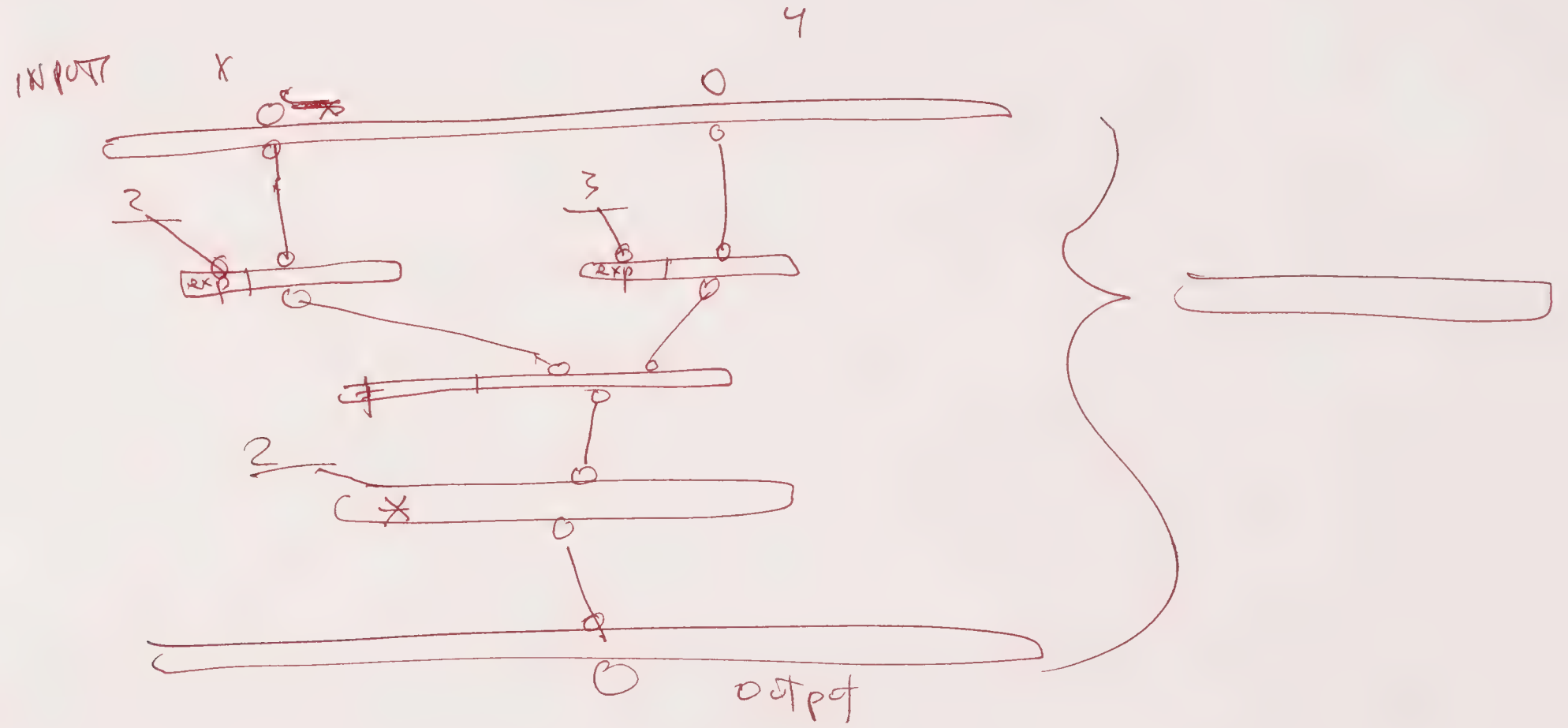
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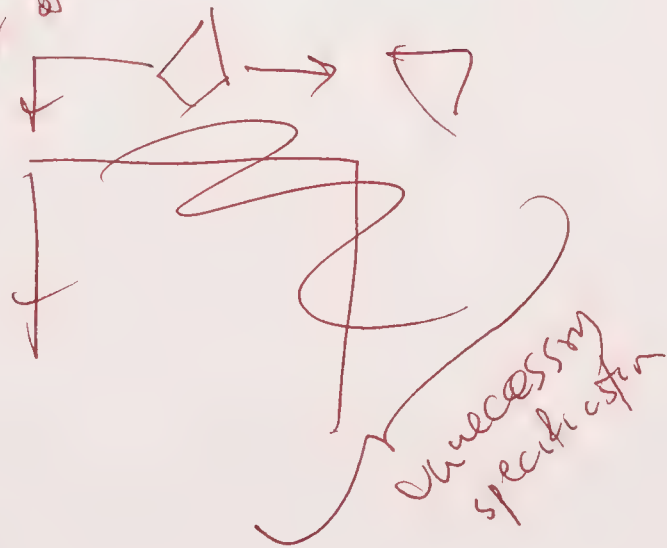
MISCELLANEOUS DISCUSSIONS —

Prograph: GRAPHICAL DATAFLOW LANGUAGE.

$$2(x^2 + y^3)$$



Flawchart:
you specify
order of operation



unnecessary
specification

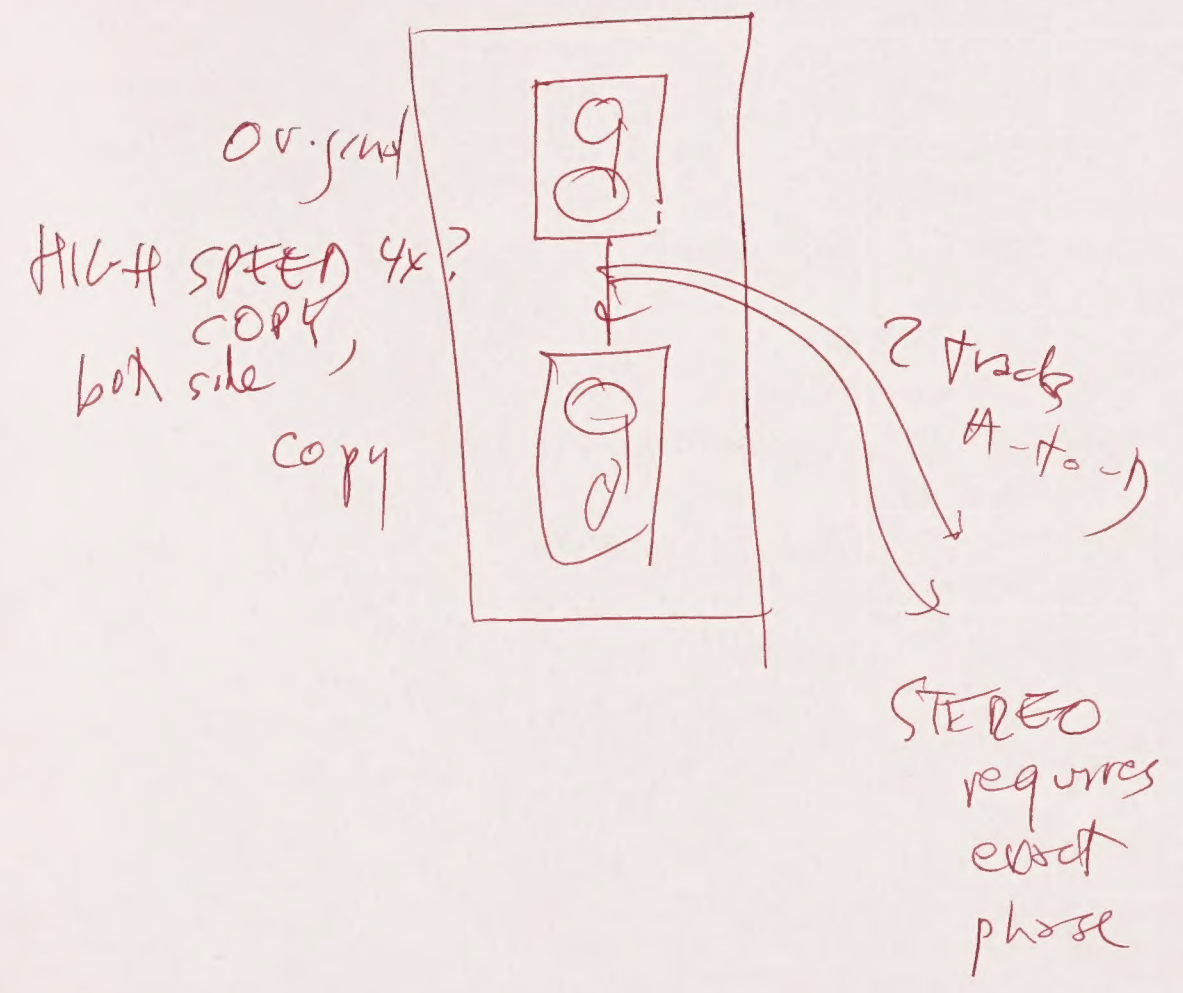
Erdős numbers:

- ∅ if you are Erdős.
- 1 if you have collaborated with Erdős.
- 2 if you " " " with a Erdős!
- ⋮

Kevin Bacon numbers

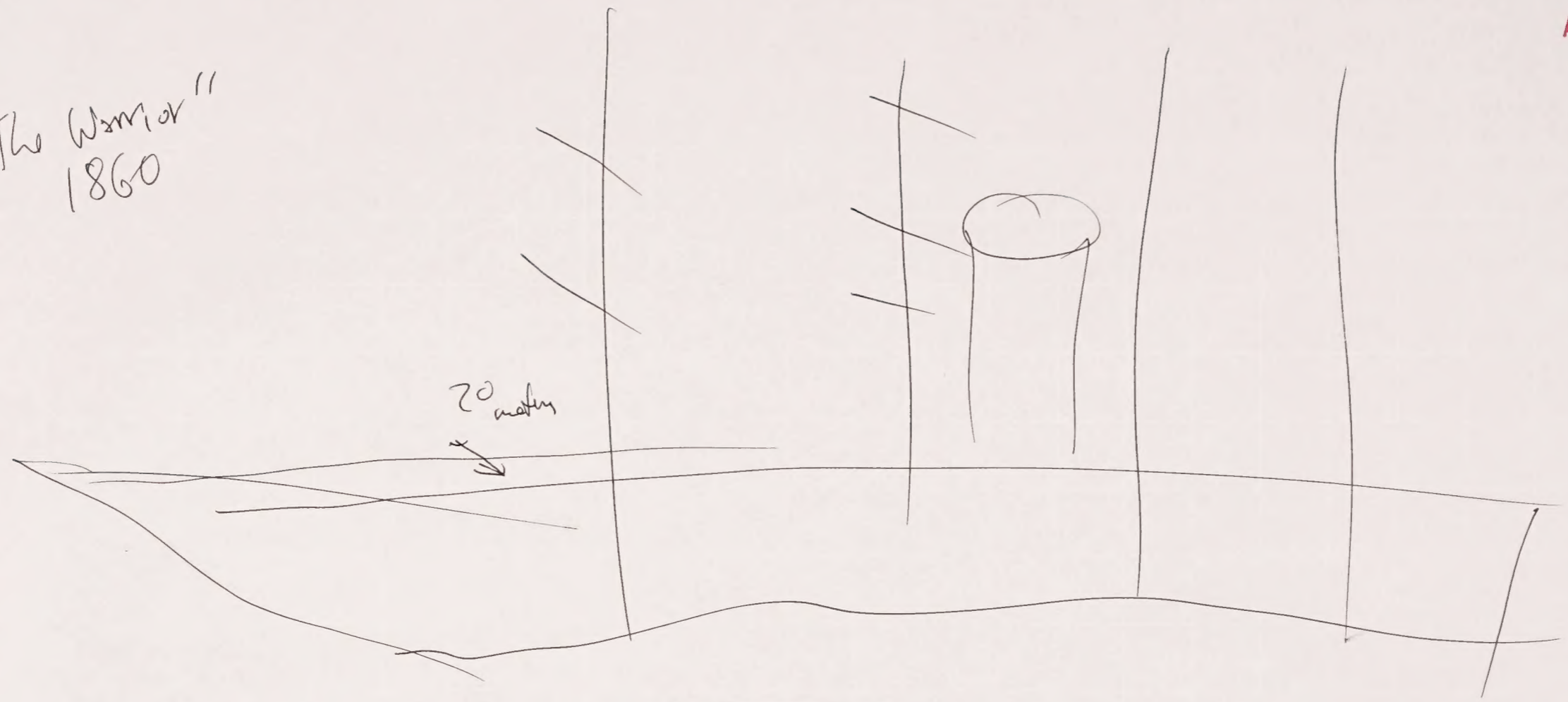
- ∅ if you're Kevin Bacon
- 1 if you've been in a movie with Kevin Bacon
- 2 if you " " " " " with a KB 1 etc.

How I HOPE TO DIGITIZE MY AUDIOTAPES —



"The Warrior"
1860

1860



20 meters

420 feet

~~550~~

~~37~~
140 meters

~~APR 17 1997~~

[Where "The Warrior" patrolled]

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