

Abrupt shift of goals now!

7/74?

Two goals of this talk

- Update of CSK
 - Presentation of Certjester / Suptjester (Schweder)
 - Saltzer, Schweder, Colletto (then + her), Clark, Visotser
 - now → Redell [One of designers of CAC
was educated by Lampson + Foley]

Update

- Technology X'ers
 - Multics running at 10 sites
 - Another book written by an "outsider" (6 new visitors)

- Certjester / Suptjester
~~Cont-sharing aspects~~
 HSI + intermixer
 ↓ conclusion =

↳ New ~~goals~~ ~~number~~ ~~of~~ ~~goals~~

- Network / Multics continuity
 e.g., - cable + interface to development machine - PCC
 - new host-to-host protocols, Telnet, FTP
 - The Multics product changes (out of our control)

Goal: Keep the interface operational, so that the concept won't die; will be there when needed.

- Terminal system support; explain terminals.

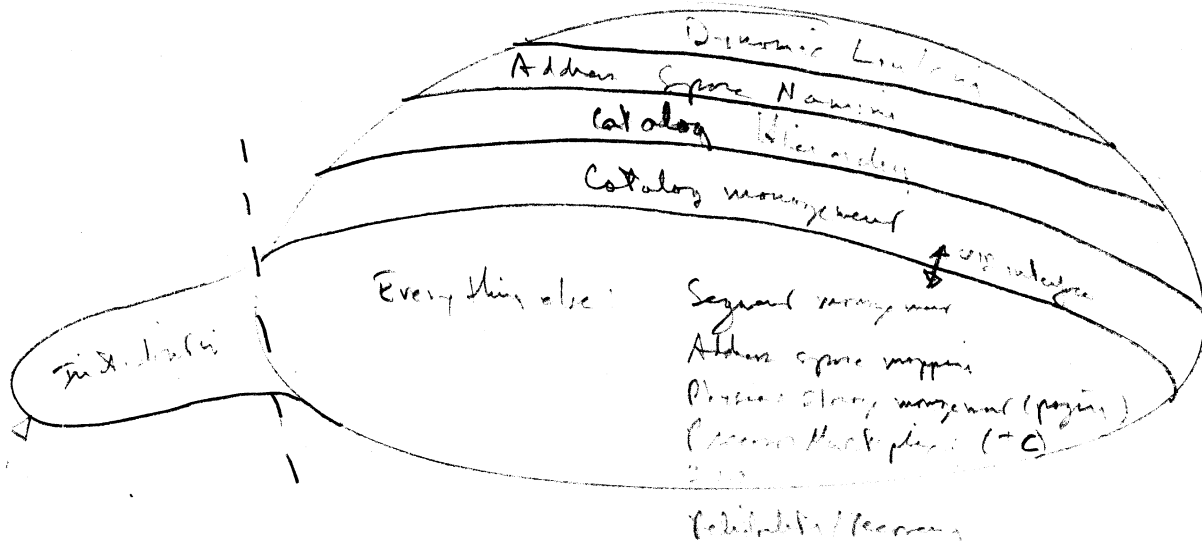
Presentation of Certjester

5 min: Clark - future directions



For presentation

- Further details
- Issues re military usefulness
- (ix) ↓



- System action

1. Divide into parallel processes
2. Build layers
3. Do algorithms need access to protection layers? No
How to take advantage?

See clearly X 0.5

See less clearly (as usual) X 0.5

Uncertainties: can predict effect of simplification

20k 04E

↓

X.5 10k 04E

b

?

CERTIFICATION: "SIGNING OFF"

ON A STATEMENT OF ADEQUACY

MUST BE PRECEDED BY REVIEW

REVIEW

- OF STRUCTURE
- OF PROOF TECHNIQUES,
(IF USED)
- OF CODE



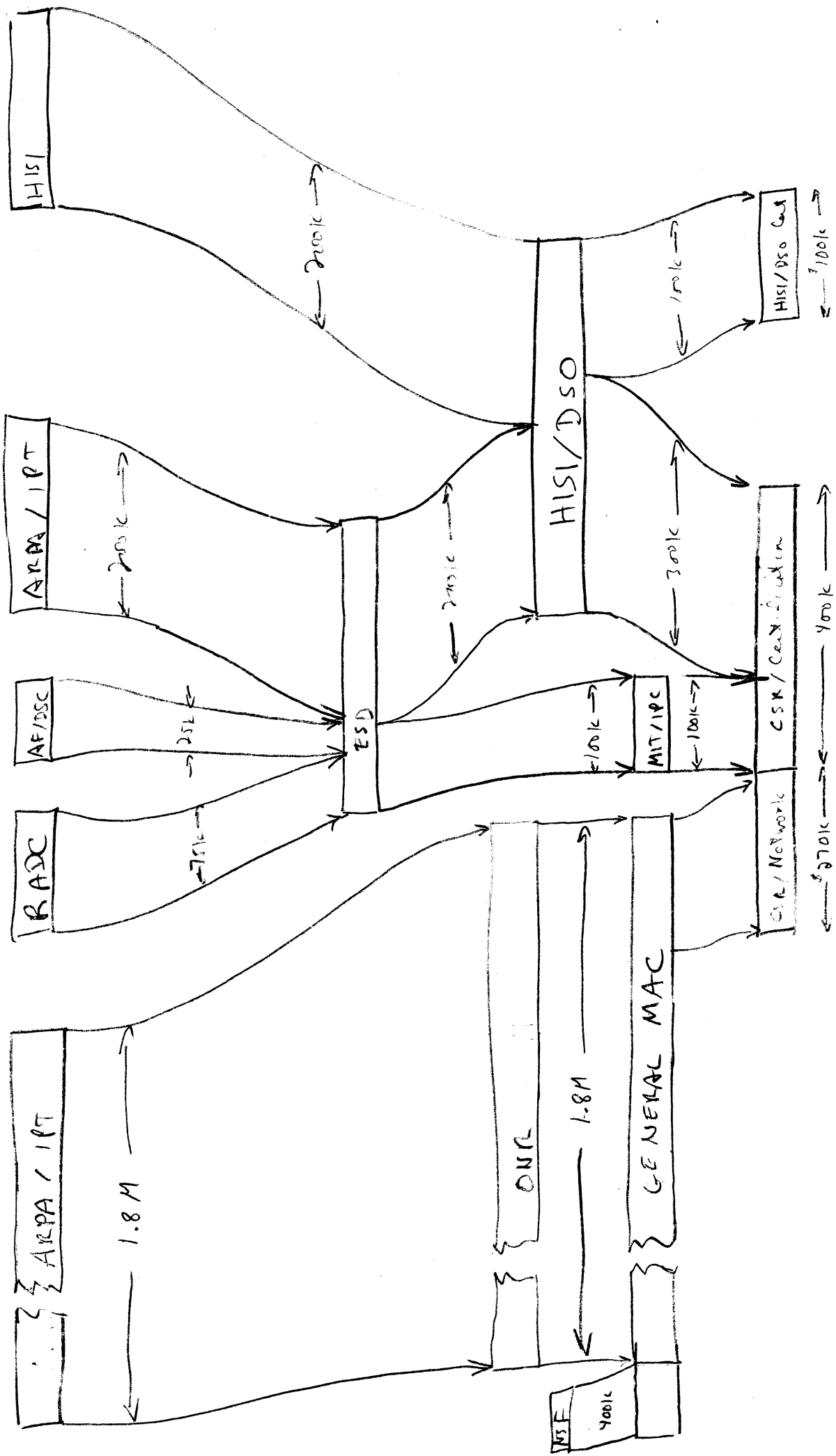
ALL REQUIRE MINIMIZING

IMPLEMENTATION COMPLEXITY



SIMPLIFICATION

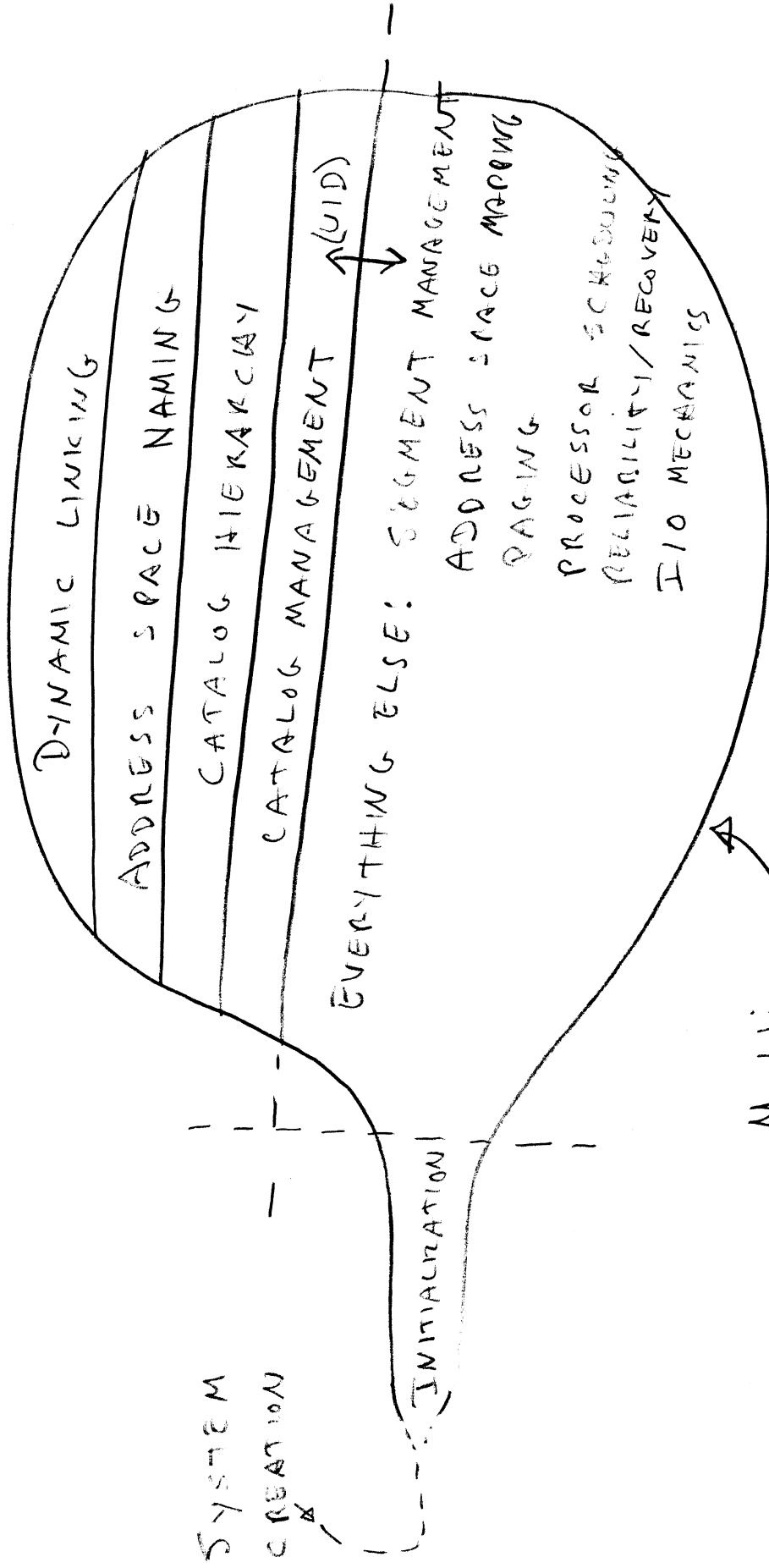
CSR
DOES
THIS



CSR Support 5/31/74
(Yearly figures)

JAS

SIMPLIFICATION: REDUCE BUCK



See clearly X0.5

Less Clean X0.5

Cross product effect X0.5

Result ~ X0.125

SIMPLIFICATION: BETTER ORGANIZATION

- PARALLEL PROCESSES FOR
 - PROCESS LOADING
 - REMOVING PAGES FROM EACH
 - STORAGE LEVEL

- BUILD IN LAYERS, ABSTRACT MACHINES
 1. HARDWARE
 2. FIXED NUMBER OF PROCESSES
 3. PAGING
 4. VARIABLE NUMBER OF PROCESSES
 5. EVERYTHING ELSE

- GET POLICIES OUT OF PROTECTED KERNEL

RELATED PROJECTS

HISI/CISL → TURN MULTICS INTO
A USABLE PRODUCT

HISI/DSD → ADD ISOLATION
PROTECTION FOR
GM AND USAF
(AND INTEGRATE
WITH STANDARD
PRODUCT)

MAC/CSR → DISCOVER ESSENCE
OF SIMPLEST
POSSIBLE SUPPORTING
MECHANISM, AND
BUILD IT AS PROOF