

```

IEF285I  SYS1.T360                PASSED
IEF285I  VOL SER NOS= NYSC05.
IEF285I  SYS69199.T022703.SV000.TXT360.R0000007  SYSOUT
IEF285I  VOL SER NOS= SPOOL2.
IEF285I  PRINT                    PASSED
IEF285I  VOL SER NOS= NYSC05.
IEF285I  SYS69199.T022703.RV000.TXT360.EXCFILE  DELETED
IEF285I  VOL SER NOS= NYSC04.
IEF285I  SYS69199.T022703.RV000.TXT360.MASFILE  DELETED
IEF285I  VOL SER NOS= SPOOL2.
IEF285I  SYS1.DICT                KEPT
IEF285I  VOL SER NOS= NYSC05.

```

```

STEP TIME=00.00.04
//STEP5 EXEC PGM=PRT
//T360PT DD DSN=PRINT,DISP=(OLD,KEEP),UNIT=2311,VOLUME=SER=NYSC05, X
//          DCB=(RECFM=FB,LRECL=132,BLKSIZE=132)
//T360PNT DD SYSOUT=A,DCB=(,BLKSIZE=132,LRECL=132)
//DICT DD DSN=SYS1.DICT,DISP=(OLD,KEEP),DCB=(,BLKSIZE=2000), X
//          UNIT=2311,VOLUME=SER=NYSC05
//SYSABEND DD SYSOUT=A
//FINALPRT DD DSN=*.STEP3.PRTOT,VOLUME=REF=*.STEP3.PRTOT, Z
//          DISP=OLD,DCB=(RECFM=FB,BLKSIZE=132,LRECL=132),UNIT=2311
//SYSPRINT DD SYSOUT=A

```

FANTICS

17-18 July 69  
1 AM

```

IEF236I ALLOC FOR TXT360 STEP5
IEF237I JOBLIB ON 191
IEF237I T360PT ON 191
IEF237I T360PNT ON 192
IEF237I DICT ON 191
IEF237I SYSABEND ON 192
IEF237I FINALPRT ON 191
IEF237I SYSPRINT ON 192

```

GENERAL RESIDENT DISPATCHER FOR SCOPE

ROLLOUT FOR PRINT/PUNCH

DATE OF THIS ROLLOUT: ~~FRIDAY-SATURDAY~~ <sup>THURSDAY-FRIDAY</sup> 17-18 JULY 1969, 1 AM

NAME OF CONTENTS: FANTICS, A BOOK DRAFT.

DATA SET, PRINT DATA SET: TED, TEDPRT

DESCRIPTION OF WORK: ADDITIONS AT THE ADDITION AREA, REARRANGEMENTS.

WORK SYSTEMS: OUTLINE PARTS BEING PUT BETWEEN SLASHES.

REMARKS: WHAT THE HELL, LET'S WRITE A BOOK.

\*\*\*\*\*

\*\*\*\*\*

SYSTEMS NOTE. THIS IS THE COPY BUFFER. EVERYTHING HERE HAS BEEN  
COPIED FROM AREA "LIVNPT". NOTE THAT THERE ARE NO "CHAPTERS." WHEN  
SECTIONS GET COMBINED INTO CHAPTERS IS THE LAST THING ON MY MIND.

-----  
----- INCOME-TAX HELP SYSTEM (ALTERNATIVES)  
----- EXAMPLE: FLIPTYCH ----- ((1:48 AM 10 JULY)) ----- ((8:20 PM FRI 11  
JULY)) ((CLOSED 10:48 PM)) ----- ((1:15 AM 11-12 JULY))

-----  
----- CREATIVITY SYSTEMS TABLE OF MEDIA & THEIR CORRESPONDING CREATIVITY  
SYSTEMS ((3:10 AM 11-12 JULY))

-----  
----- ((INSERTIONS THURSDAY-FRIDAY 17-18 JULY 1969, STARTING 12:30 AM))  
FEELING-SPACES (INCL. MULTIDIMENSIONAL) CAN WE CONCEPTUALIZE MULTIPLE  
DIMENSIONS? THE HYPERCUBE DASHBOARD ENVIRONMENTS MULTI-DIM 'FEEL' CLUES:  
AUDITORY, PROPRIO, KINESTH, PUSH-PULL, BREEZE, COLOR, VIBRATION, STEREO-  
PHONY, VISUAL STEREO THE 4-D HYPERCUBE THE MYTH AND TRADITION OF NARROW  
COMPUTER USAGE, RIGID INPUT STRUCTURES (HARDLY SOPHISTICATED) WHAT COMPU-  
TERS ARE (BRIEF EARLY REMARKS) ((12:45 AM 17-18 JULY))

3

-----  
----- ((MANUSCRIPT IS SUPPOSED TO BEGIN HERE))  
-----

/INTRODUCTION XXX DERIVATION OF TERM "FANTICS": TWO USEFUL ROOTS, "FANEIN," TO SHOW, AND "FANTASTEIN," TO PRESENT TO THE MIND OR EYE. THE LATTER WOULD CLEARLY, FROM ITS MEANING, BE THE PREFERABLE ROOT. HOWEVER, THEN THE WORD WOULD BE "FANTASTICS," WHICH WOULD HAVE RATHER THE WRONG MEANING. IT WOULD ALSO TAKE AWAY THE SENSE: HERE I CAN SPEAK OF "A FANTIC SYSTEM" AND MAKE IT MEAN SOMETHING, WHEREAS TO CALL IT A "FANTASTIC SYSTEM," THOUGH PROBABLY TRUE, WOULD CLOUD THE ISSUE AS WELL AS RAISE THE PITCH OF DISCUSSION UNCOMFORTABLY./

5

WE ARE CONFRONTED TODAY WITH A SUPPOSED EXPLOSION OF INFORMATION, INFORMATION SYSTEMS AND NEW MEDIA. WHAT THEY ARE, AND WHERE THEY ARE GOING, IS A MATTER OF CONSIDERABLE EXCITEMENT AND SPECULATION. THIS BOOK OFFERS A RATHER DIFFERENT POINT OF VIEW.

/"THE INFORMATION EXPLOSION" "THE KNOWLEDGE INDUSTRY" SYNNOETICS CYBER-CULTURE MEDIA BARRAGES MEDIA MESSAGES./

/SCOPE PREDICTION WHOPPEROD (SHORT & SUMMARY) MEDIA, ENVIRONMENTS, IDEAS, COMMUNICATION, FEEL./

THIS BOOK SEEKS TO MAKE SEVERAL POINTS. THE BASIC POINT IS THAT THERE EXISTS A NEW ART AND SCIENCE, FANTICS, AND THAT ATTEMPTS TO UNDERSTAND IT FROM MORE SPECIALIZED POINTS OF VIEW HAVE FAILED SO FAR. THIS FIELD OF FANTICS EMBRACES THE COMMUNICATION OF IDEAS, AND THE NECESSARY STRUCTURING OF MEDIA, ENVIRONMENTS AND FEEL. THIS TOPIC IS UNIFIED, RATHER THAN DIVERSE. THE DIFFERENT KINDS OF MEDIA AND ENVIRONMENTS POSSIBLE ARE MANY: BUT THE CONSIDERATIONS UPON WHICH THEY MUST BE BASED ARE UNIVERSAL, AND DO NOT APPROPRIATELY FIT ANY TECHNICAL DISCIPLINE. WHAT IS MORE, THIS BOOK SEEKS TO MAKE CERTAIN PREDICTIONS ABOUT THE FUTURE. WE ARE ENTERING WHAT I WOULD CALL A FANTIC WORLD, IN WHICH OUR MEDIA CAN BE AS GRACIOUS, BEAUTIFUL AND EXCITING AS ANY PREVIOUSLY KNOWN TO HUMAN CULTURE, OR THEY CAN BE CRUDE, UNSATISFYING AND SUBTLY AWFUL. I ADVOCATE THE FORMER. MOREOVER, I THINK THE FORMER WILL COME TRUE. I THINK THAT WHEN IT IS GENERALLY REALIZED WHAT IS POSSIBLE, THE WORLD WILL CHANGE DRAMATICALLY IN CERTAIN SPECIFIC AND IMPORTANT WAYS. THIS WILL INVOLVE UPHEAVALS IN EDUCATION, ENTERTAINMENT, AND HOME AND BUSINESS LIFE, AS WILL PRESENTLY BE DESCRIBED.

THE GENERAL PREDICTION IS APPROXIMATELY THIS, AND I WISH TO STATE IT AS BALDLY AS POSSIBLE TO AVOID MISUNDERSTANDING. WITHIN A FEW YEARS-- CERTAINLY LESS THAN TWENTY--THE WRITTEN WORD WILL NO LONGER BE GENERALLY PRINTED, BUT WILL BE STORED IN COMPUTERS AND READ FROM COMPUTER DISPLAYS IN OUR HOMES, OFFICES AND EVERYWHERE.

THE WRITTEN MEDIA OF OUR FORMER CULTURE WILL BE REPLACED, ENLARGED AND IMPROVED BY A NEW MEDIUM, WHICH I CALL HYPERTEXT. HYPERTEXT WILL BE TO ORDINARY WRITING AS FLYING IS TO WALKING.

THE ILLUSTRATIONS OF HYPERTEXTS WILL BE HYPERGRAMS, PICTURES WHICH THE USER CAN MAKE TO REACT OR PERFORM. THE OTHER ARTIFACTS OF OUR CULTURE, INCLUDING SUCH THINGS AS PAINTING, SCULPTURE AND ARCHITECTURE, WILL COME ALSO TO BE STORED IN COMPUTERS FOR OUR ENJOYMENT.

MOTION PICTURES AND MUSIC WILL ALSO BE CREATED BY COMPOSERS AND ANIMATORS, AND THEIR BASIC PLANS STORED IN COMPUTER LIBRARIES WHERE THEY MAY BE GOTTEN AT AND RE-PERFORMED READILY. FOR ALL CREATIVE PURPOSES, COMPUTER-BASED "CREATIVITY SYSTEMS" WILL BE THE WORKING CONSOLES AT WHICH THE ARTIST AND WRITER MAY WORK MORE EFFECTIVELY THAN EVER BEFORE.

6

/ CL: DIGITAL CONTROL, COMP DISP., DIG. LIBRARIES THE THREE BASICS  
COMPUTERS CAN DO FOR SHOWING: STORAGE, PERFORMANCE, CONTROL (OFT ORDER?)  
INFO FACILITIES SUPPLEMENTING CREATIVE ENVTS/

THESE DEVELOPMENTS WILL COME ABOUT FOR SEVERAL REASONS. THE FIRST IS  
THAT COMPUTERS NATURALLY FORM THE BEST DEVICES FOR CONTROLLING OTHER  
MACHINES, AND MAKING THEM MORE RESPONSIVE AND FLEXIBLE THAN THEY EVER  
COULD BE OTHERWISE.

THE SECOND IS THAT COMPUTERS CAN DIRECTLY PERFORM VARIOUS PRESENTATIONS  
FOR US: CAUSING WORDS TO APPEAR ON SCREENS, MAKING DIAGRAMS ON SCREENS,  
EVEN MAKING MUSIC AND MOTION PICTURES IN FULL COLOR.

THE THIRD IS THAT THE STRUCTURED INFORMATION FOR THESE ACTIVITIES MAY  
BE STORED WITH GREAT SAFETY AND ACCESSIBILITY ON COMPUTER EQUIPMENT, AND  
AUTOMATICALLY FORWARDED TO PEOPLE WHO WANT TO USE IT.

A FOURTH REASON IS THAT COMPUTERS, THROUGH VARIOUS HELPFUL CAPACITIES,  
CAN STAND BY AND ANSWER CERTAIN KINDS OF QUESTIONS AND WORK OUT CERTAIN  
KINDS OF CALCULATIONS FOR US.

A FIFTH REASON IS THAT COMPUTER STORAGE MAKES POSSIBLE A RICHNESS,  
SUBTLETY AND COMPLEXITY OF STORED INFORMATION AND IDEAS WHICH IS BEYOND  
ANYTHING THE WORLD HAS PREVIOUSLY KNOWN.

ON THE FACE OF IT MANY PEOPLE WILL NOT FIND THIS AN ATTRACTIVE IDEA.  
FOR VARIOUS REASONS, INCLUDING STUPIDITY, COMPUTER MANUFACTURERS AND  
ENTHUSIASTS HAVE STIRRED UP THE BROADEST POSSIBLE MISUNDERSTANDING OF WHAT  
COMPUTERS ARE AND DO, STIRRING UP FEELINGS OF DISTASTE AND APPREHENSION  
APPROACHING REVULSION ON THE PART OF MANY. IN THIS BOOK, THEN, I WILL  
ATTEMPT TO EXPLAIN WHY COMPUTERS CAN BE OF THE GREATEST POSSIBLE HELP IN  
MAN'S SOFTEST AND WARMEST OCCUPATIONS, AND WHY THEY SHOULD AND WILL BE  
WELCOMED BY THE WRITER, THE ARTIST AND THE PUBLIC INTO HOME AND STUDY.

-----  
/SECTION: THE FABULOUS WORLD OF COMPUTER DISPLAY. OR, "TOYS AND  
JEWELS"/

/ WHAT'S COMING IS STRUCTURED MEDIA, NOT A HODGEPODGE WHAT IS A MEDIUM?  
VIABILITY OF MEDIUM IN SOCIETY CONCEPTUAL UNITY OF MEDIUM NOBODY FORESEES  
MEDIA IMPACT, AS A RULE XXX MOVIE ANALOGY TV ANALOGY BOOK ANALOGY  
MCLUHAN'S ONTO IT, EVEN IF HE DOESN'T UNDERSTAND THE TECHNICALITIES.  
BASIC DISAGREEMENT WITH MCLUHAN: THE GREAT DIFFERENCES AMONG ELECTRONIC  
MEDIA, AND THE STUPENDOUS DIFFERENCE IT MAKES MEDIA THAT HAVE FLOPPED  
PROBLEMS OF A MEDIUM CATCHING ON: MARKETING, COHERENCE, SIMPLICITY &  
CONVENIENCE/

7

/MACHINES MUST NOT MAKE DECISIONS FAKE SCIENTIFIC VOTING-DISTRICTS WE  
MUST JOLLY WELL UNDERSTAND THE DECISIONS WITH WHICH MACHINES ARE  
ENTRUSTED/

/REVIEW OF HISTORY TOWARD THIS POINT, REWRITTEN IN MY TERMS. SECTION:  
THE FANTIC MEDIA TO 1900 SECTION: THE FANTIC MEDIA TO 1950 SECTION: THE  
FANTIC MEDIA TO 1969 OR 1970 FRITZ MACHLUP "TEACHING TECHNOLOGY" NELSON'S  
TIMETABLE CHART OF FALLING PRICES PLAIN HALFTONE SYSTEMS STATIONERY  
SYSTEMS THE CREATIVITY SYSTEMS OF THE PAST THE RECORD-KEEPING SYSTEMS OF  
THE PAST NOT GL. COMPUTERS BUT SPECIAL THE SCATTERED CONSUMPTION OF  
SYSTEMS IN HOMES-- NOW TO BE UNIFIED CASSETTE-CAMERA TIMETABLE FOR  
INTRODUCTION OF COMPUTER DISPLAYS IN HOMES/

/SECTION: HORIZONS FOR SALE SECTION: THE NEW-MEDIA WHIZBANG XXX  
EMPEROR'S CLOTHES SECTION: THE MYTH OF TECHNICALITY GENERAL DEBUNK-LIST:  
IR, HUM.FACT., CAI, 'TOP MAN' IR 'MANAGERIAL INFORMATION RETRIEVAL' AS A  
HOTCHA THING ONLY FOR THE TOP GUYS DEBUNK ALSO: DIAGNOSIS BY COMPUTER,  
AUTOMATIC DICTATION, ARTIFICIAL INTELLIGENCE I DO NOT WANT TO TALK ABOUT A  
WORLD IN WHICH MACHINES ENTER THE BODY, AT LEAST PROSTHETICALLY OR  
PHYSIOLOGICALLY OR INNERVATIVELY PATIENT RECORDS ONLINE CLERICAL IR  
(ANOTHER NARROW VISION)/

/SECTION: NEW MEDIA COMPONENTS HOLOGRAPHY "BRANCHING" AS A WHIZBANG  
ASPECT OF NEW MEDIA COMPONENTS COUPLED EVERY WHICH WAY NOW ELECTRICAL  
COUPLING OF COMPONENTS CONCRETE PHYSICAL COUPLING OF COMPONENTS/

/CONVERGENT MEDIA VS. MERE ENGINEERING OPPORTUNITIES/  
-----

HEREAFTER THERE ARE NOT SLASHES, BECAUSE EVERYTHING IS OUTLINE MATERIAL.

9

SECTION: POSSIBLE WORLDS OF VISION AND RESPONSE

IGNORE CLUMSINESS OF EARLY SYSTEMS. THESE WILL BE AS EASY TO USE AS TV SETS

GOOD OLD SKETCHPAD I SKETCHPAD 3 SUTHERLAND'S STEREO SYSTEM 3-D 'TANK'

'TRUE STRUCTURE' SYSTEMS SECTION: THE MEANING OF STRUCTURED DATA

---

SECTION: "COMPUTER-ASSISTED INSTRUCTION" XXX TUT-TUTORIAL SYSTEMS THE  
BADS OF CAI BRICK-WALL ILLUSTRATION THE NATURE OF INTELLIGENCE AND ITS  
GROWTH THE OPPOSITE AIMS OF TOP AND BOTTOM EDUCATION THE CRITICS OF THE  
SCHOOLS TODAY THE INSIDE STORY ON PROG. ED.: WE HATE TO DO IT, HATE TO  
STUDY IT

SECTION: WHAT EDUCATION IS ABOUT ANYWAY XXX SECTION: SLAMMED MINDS  
XXX THE BIG SECRET: FREE ACCESS TO INTERESTING MATERIALS, CONVERGENT  
MOTIVATIONAL ENVIRONMENT IS THE KEY

SECTION: "INFORMATION RETRIEVAL" BOOLEAN SYSTEMS: JUST THE BEGINNING  
OF WHAT THE MIND NEEDS

"HUMAN FACTORS" XXX NARROW CRITERIA OF "HUMAN FACTORS" GENERALLY  
IRRELEVANT NICELY UNIFIED CONTROLS CONTROLS OF SONY TC-50 CONTROL OF  
ALL-TERRAIN VEHICLE HELICOPTER HANDLE AIRPLANE "STICK" XXX A CHURCH CAN BE  
THOUGHT OF AS HUMAN-FACTORS DESIGNED, ANYHOW, IF YOU LET IN ENOUGH  
VARIABLES

-----

11

COMPUTER-CONTROLLED MEDIA SECTION: THE COMPUTER AS MEDIA CONTROLLER

"MULTI-MEDIA"

SECTION: HYPER-FANTIC MEDIA OF VARIOUS SORTS

HYPER-COMICS

HYPER-POETRY

SWELL NEW PRESENTATIONAL MEDIA, ESPECIALLY ALL-AROUND-YOU SOUND, BEAU-  
TIFUL PROJECTION SYSTEM AMUSEMENT PARKS AWESOME ARCHITECTURE MUSEUMS &  
FAIRS SECTION: THE UNIFICATION OF SONIC AND VISUAL ARTS TODAY'S ROCK  
MUSIC LIGHT SHOWS

EXAMPLE: MOVING-SCREEN LORD OF RINGS

EXAMPLE: HYPERFILM OF WWII

-----

SECTION: THE COMPUTER AS PERFORMER SUPER-AUDIO MACHINE THREE-DIMENSIONAL SCENE STRUCTURES SHIPLOFTING, AIRFRAME, AUTO DESIGN SYSTEMS

MUSIC LIBRARY TO FEED THROUGH MUSIC PERFORMANCE MACHINE

SECTION: STRUCTURED PICTURES

FSM SECTION: FANTASM-TYPE SYSTEMS DESCRIPTION OF GE FSM SYSTEM, UTAH FSM SYSTEM, DENVER FSM SYSTEM, NELSON'S FSM SYSTEM LIBRARY OF FSM 'PERFORMANCES' LIBRARY OF FANTASM CHARACTERS

SECTION: HYPERGRAMS XXX BRAIN PROJECT

-----

13

TEXT SYSTEMS XXX THE TEXT FACILITY: QUEEN OF THEM ALL XXX THE HOME TEXT CONSOLE UNIVERSAL HIGH-PERFORMANCE TEXT CONSOLES

TEXT EDITING

SECTION: CONTEXT JUMPS

SECTION: AUTHOR'S SYSTEMS

SECTION: HYPERTEXT NEWS HYPERTEXT STRATEGIC INTELLIGENCE HYPERTEXT NON-FICTION HYPERTEXT SPHERE OF INTERCONNECTEDNESS IN A LARGE-SCALE HYPERTEXT WORK

SECTION: STRETCHTEXT

SECTION: SYSTEMS FOR THINKING WITH DATA

SECTION: TEXT CONTROL SYSTEMS CINENYM

SPATIAL HYPERTEXT ENVIRONMENTS: CHECKERBOARD, CLOUDS (HANGING IN 3-SPACE), SWINGING PAGES IN 3-SPACE

-----

THE VIRTUAL SPACE OF A CONCEPTUAL AND DISPLAY ENVIRONMENT THE MECHANICS  
OF SPRINGS, LIGHTING & HUSH CAN WE VISUALIZE 4-D CUBE? CAN WE VISUALIZE  
CALHAMER BOARD? ADDITIONAL DIMENSIONS MORE DIMENSIONS THROUGH COLOR,  
SMELL AND SOUND MORE DIMENSIONS THROUGH SPRING-LOADING SWOOP FEEL RESPONSE  
QUALITIES

THE GENERAL-PURPOSE SYSTEM TOWARD WHICH WE ARE MOVING (LINE-DRAWING,  
MOVING-TEXT)

LIBRARY ARRANGEMENTS FOR ALL DIGITAL MEDIA SECTION: THE ONLY PERMANENT  
FORM OF STORAGE DIGITAL STORAGE IS PERFECT DIGITAL STORAGE MAY BE  
SAFEGUARDED DIGITAL STORAGE OF PAINTINGS

ACCOUNTING STRUCTURES THE NATURE OF ACCOUNTING

-----

15

SECTION: THE EASE OF USE

SECTION: THE NATURE OF CATEGORIES

SECTION: THE NATURE OF THE CREATIVE PROCESS XXX INDUCTIVE & AXIOMATIC  
CREATION

SECTION: SYSTEMS FOR ALL THESE

SECTION: THE NATURE OF IDEAS XXX MICKEY MOUSE SECTION: SOME BASIC  
QUESTIONS IN THE PSYCHOLOGY OF THOUGHT AND FEELING SECTION: UNITY,  
STRUCTURE AND FEEL

THE NATURE OF WRITING THE NATURE OF IDEAS EXPOSITORY STRUCTURES IDEAS  
AS ANNOTATED CONNECTIONS XXX BREAKING EXPOSITORY STRUCTURES

-----

INTERPERSONAL ENVIRONMENTS AIR CONTROLLER ENVT HANDSHAKE STRUCTURES

TIME DISSECTOR FOR AUDIO, FSM

-----

17

SECTION: ART & THE ARTS

SECTION: SCHOLARSHIP EXAMPLE: 4-D DATA STRUCTURE PERMITTING ROMAN SNAPSHOTS

SECTION: THE DANGERS OF LOSS

SECTION: ON THE PROBLEM OF KEEPING TOO MUCH THE SOUVENIRS OF OUR WORLD THE US NATIONAL ARCHIVE: 2 BILLION DOX

SECTION: REVIEW OF MY VISION: GRAND LIBRARIES, SWOOPING SYSTEMS, TRUE EDUCATION, THE PRESERVABILITY OF THE HERITAGE A LIBERAL'S HOPES XXX OUR MEDIA OF THIS CENTURY: THEIR MISERABLE CONTENT AND YET THEIR COMMON IMAGERY TO US ALL PROFESSIONALISM, BUREAUCRACY, THE NARROW INITIATIVE-PATHS TO SUCCESS IN OUR WORLD XXX WHERE THESE PROPHECIES STOP FREEDOM OF INFORMATION FOR THE CITIZEN FREEDOM FROM CONCRETE POSSESSION OF BOOKS FREEDOM OF EDUCATION HYPERSYSTEMS FOR EDUCATION IN THE UNDERDEVELOPED COUNTRIES NOTE THE NUMBER OF ROLES IN OUR SOCIETY BUILT AROUND THE HOARDING OF INFORMATION TRUE ACCESS TO NEWS THROUGH HYPERTEXT SYSTEMS LIEBLING ON THE PRESS NATURE OF THE PRESS: OWNERSHIP VIEWPOINT, PRESS SUBCULTURE, DOMINATION OF THE AGREED-ON, THE ANGLE, AND THE SILLY THE DANGER OF SUDDEN ELECTRICAL DESTRUCTION I AM ASSUMING PEACE, OF COURSE

((APPENDICES)) -----

SECTION: TERMINOLOGY

SECTION: HOW COMPUTER DISPLAYS WORK HOW COMP. DISPLAYS WORK

SECTION: HOW COMPUTERS WORK

SECTION: THE MEANING OF DATA STRUCTURE

-----

\*

THIS AREA IS FOR LIVE INPUT, IN A PROTOCOL FASHION. THE BOOK GETS PUT TOGETHER IN THE AREA "FCS", AT LEAST FOR TONIGHT. (3 JULY 1969, 10:30 P.M.)

THESE ARE RANDOM INSERTIONS TOWARD THE BOOK \_\_FANTICS. 2 JULY 1969. XXXXX REVIEW OF HISTORY TOWARD THIS POINT, REWRITTEN IN MY TERMS. XXXXX THE GENERAL-PURPOSE SYSTEM TOWARD WHICH WE ARE MOVING (LINE-DRAWING, MOVING-TEXT) XXXXX THE BIG SECRET: FREE ACCESS TO INTERESTING MATERIALS, CONVERGENT MOTIVATIONAL ENVIRONMENT IS THE KEY XXXXX SUTHERLAND'S STEREO SYSTEM XXXXX AMUSEMENT PARKS XXXXX

SECTION: TERMINOLOGY SECTION: HOW COMPUTER DISPLAYS WORK SECTION: HOW COMPUTERS WORK INTRODUCTION SECTION: THE MYTH OF TECHNICALITY SECTION: THE FABULOUS WORLD OF COMPUTER DISPLAY. OR, "TOYS AND JEWELS" SECTION: SOME BASIC QUESTIONS IN THE PSYCHOLOGY OF THOUGHT AND FEELING SECTION: "COMPUTER-ASSISTED INSTRUCTION" SECTION: "INFORMATION RETRIEVAL"

SECTION: POSSIBLE WORLDS OF VISION AND RESPONSE SECTION: WHAT EDUCATION IS ABOUT ANYWAY SECTION: HYPERTEXT SECTION: STRETCHTEXT SECTION: HYPERGRAMS SECTION: CONTEXT JUMPS SECTION: AUTHOR'S SYSTEMS SECTION: THE EASE OF USE SECTION: THE NATURE OF CATEGORIES SECTION: THE NATURE OF IDEAS SECTION: THE NATURE OF THE CREATIVE PROCESS SECTION: SYSTEMS FOR ALL THESE SECTION: SYSTEMS FOR THINKING WITH DATA SECTION: THE DANGERS OF LOSS SECTION: ON THE PROBLEM OF KEEPING TOO MUCH SECTION: A LIBERAL'S HOPES

SECTION: SLAMMED MINDS SECTION: THE UNIFICATION OF SONIC AND VISUAL ARTS SECTION: UNITY, STRUCTURE AND FEEL NELSON'S TIMETABLE WHERE THESE PROPHECIES STOP MOVIE ANALOGY EMPEROR'S CLOTHES BOOLEAN SYSTEMS: JUST THE BEGINNING OF WHAT THE MIND NEEDS TUT-TUTORIAL SYSTEMS THE BADS OF CAI BRICK-WALL ILLUSTRATION

"THE INFORMATION EXPLOSION" "THE KNOWLEDGE INDUSTRY" SYNNOETICS CYBER-CULTURE MEDIA BARRAGES MEDIA BARRAGES MCLUHAN'S ONTO IT, EVEN IF HE DOESN'T UNDERSTAND THE TECHNICALITIES. BASIC DISAGREEMENT WITH MCLUHAN: THE GREAT DIFFERENCES AMONG ELECTRONIC MEDIA, AND THE STUPENDOUS DIFFERENCE IT MAKES FRITZ MACHLUP "TEACHING TECHNOLOGY" THE INSIDE STORY ON PROG. ED.: WE HATE TO DO IT, HATE TO STUDY IT DERIVATION OF TERM "FANTICS": TWO USEFUL ROOTS, "FANEIN," TO SHOW, AND "FANTASTEIN," TO

21

PRESENT TO THE MIND OR EYE. THE LATTER WOULD CLEARLY, FROM ITS MEANING, BE THE PREFERABLE ROOT. HOWEVER, THEN THE WORD WOULD BE "FANTASTICS," WHICH WOULD HAVE RATHER THE WRONG MEANING. IT WOULD ALSO TAKE AWAY THE SENSE: HERE I CAN SPEAK OF "A FANTIC SYSTEM" AND MAKE IT MEAN SOMETHING, WHEREAS TO CALL IT A "FANTASTIC SYSTEM," THOUGH PROBABLY TRUE, WOULD CLOUD THE ISSUE AS WELL AS RAISE THE PITCH OF DISCUSSION UNCOMFORTABLY.

((((I GOT THIS FAR BY 12 P.M.: ONE AND A HALF HOURS ON THE MACHINE.))))

SPATIAL HYPERTEXT ENVIRONMENTS: CHECKERBOARD, CLOUDS (HANGING IN 3-SPACE), SWINGING PAGES IN 3-SPACE IGNORE CLUMSINESS OF EARLY SYSTEMS. THESE WILL BE AS EASY TO USE AS TV SETS THE TEXT FACILITY: QUEEN OF THEM ALL PROFESSIONALISM, BUREAUCRACY, THE NARROW INITIATIVE-PATHS TO SUCCESS IN OUR WORLD MICKY MOUSE BRAIN PROJECT SUPER-AUDIO MACHINE CINENYM "HUMAN FACTORS" XXX NARROW CRITERIA OF "HUMAN FACTORS" GENERALLY IRRELEVANT XXX A CHURCH CAN BE THOUGHT OF AS HUMAN-FACTORS DESIGNED, ANYHOW, IF YOU LET IN ENOUGH VARIABLES AWESOME ARCHITECTURE SWELL NEW PRESENTATIONAL MEDIA, ESPECIALLY ALL-AROUND-YOU SOUND XXSOUND, BEAUTIFUL PROJECTION SYSTEMS HOLOGRAPHY SECTION: THE NEW-MEDIA WHIZBANG XXX "BRANCHING" AS A WHIZBANG ASPECT OF NEW MEDIA

(TUESDAY 8 JULY, 12 PM)

SECTION: HORIZONS FOR SALE EXAMPLE: FLIPTYCH EXAMPLE: MOVING-SCREEN LORD OF RINGS EXAMPLE: HYPERFILM OF WWII SECTION: ART & THE ARTS SECTION: SCHOLARSHIP EXAMPLE: 4-D DATA STRUCTURE PERMITTING ROMAN SNAPSHOTS SECTION: NEW MEDIA COMPONENTS SECTION: THE FANTIC MEDIA TO 1900 SECTION: THE FANTIC MEDIA TO 1950 SECTION: THE FANTIC MEDIA TO 1969 OR 1970 SECTION: THE MEANING OF DATA STRUCTURE SECTION: TEXT CONTROL SYSTEMS

SECTION: THE COMPUTER AS MEDIA CONTROLLER NOBODY FORESEES MEDIA IMPACT, AS A RULE SECTION: HYPER-FANTIC MEDIA OF VARIOUS SORTS SECTION: COMPUTER-CONTROLLED MEDIA NICELY UNIFIED CONTROLS CONTROLS OF SONY TC-50 CONTROL OF ALL-TERRAIN VEHICLE HELICOPTER HANDLE AIRPLANE "STICK" SECTION: THE COMPUTER AS PERFORMER SECTION: THE ONLY PERMANENT FORM OF STORAGE SECTION: FANTASM-TYPE SYSTEMS SECTION: STRUCTURED PICTURES DIGITAL STORAGE IS PERFECT DIGITAL STORAGE MAY BE SAFEGUARDED DIGITAL STORAGE OF PAINTINGS

((INPUT OF 10 JULY 1969. JUST STARTING PRODUCTIVE WORK AT MIDNIGHT, AND I'M EXHAUSTED.))

HOW COMP. DISPLAYS WORK AIR CONTROLLER ENVT HANDSHAKE STRUCTURES  
ACCOUNTING STRUCTURES THE NATURE OF ACCOUNTING THE VIRTUAL SPACE OF A  
CONCEPTUAL AND DISPLAY ENVIRONMENT 'MANAGERIAL INFORMATION RETRIEVAL' AS A  
HOTCHA THING ONLY FOR THE TOP GUYS PATIENT RECORDS ONLINE CLERICAL IR  
(ANOTHER NARROW VISION) FREEDOM OF INFORMATION FOR THE CITIZEN FREEDOM  
FROM CONCRETE POSSESSION OF BOOKS FREEDOM OF EDUCATION NOTE THE NUMBER OF  
ROLES IN OUR SOCIETY BUILT AROUND THE HOARDING OF INFORMATION LIEBLING ON  
THE PRESS NATURE OF THE PRESS: OWNERSHIP VIEWPOINT, PRESS SUBCULTURE,  
DOMINATION OF THE AGREED-ON, THE ANGLE, AND THE SILLY THE NATURE OF  
INTELLIGENCE AND ITS GROWTH THE OPPOSITE AIMS OF TOP AND BOTTOM EDUCATION  
THE CRITICS OF THE SCHOOLS TODAY OUR MEDIA OF THIS CENTURY: THEIR  
MISERABLE CONTENT AND YET THEIR COMMON IMAGERY TO US ALL PLAIN HALFTONE  
SYSTEMS THREE-DIMENSIONAL SCENE STRUCTURES SHIPLOFTING, AIRFRAME, AUTO  
DESIGN SYSTEMS STATIONERY SYSTEMS THE CREATIVITY SYSTEMS OF THE PAST THE  
RECORD-KEEPING SYSTEMS OF THE PAST THE SOUVENIRS OF OUR WORLD THE US  
NATIONAL ARCHIVE: 2 BILLION DOC

----- ((1 AM 10 JULY)) GENERAL DERUNK-LIST:  
IP, HUM.FACT., CAI, 'TOP MAN' IR DEBUNK ALSO: DIAGNOSIS BY COMPUTER,  
AUTOMATIC DICTATION, ARTIFICIAL INTELLIGENCE I DO NOT WANT TO TALK ABOUT A  
WORLD IN WHICH MACHINES ENTER THE BODY, AT LEAST PROSTHETICALLY OR  
PHYSIOLOGICALLY OR INNERSATIVELY THE THREE BASICS COMPUTERS CAN DO FOR  
SHOWING: STORAGE, PERFORMANCE, CONTROL (DEF ORDER?) MUSIC LIBRARY TO  
FEED THROUGH MUSIC PERFORMANCE MACHINE INTERPERSONAL ENVIRONMENTS LIBRARY  
ARRANGEMENTS FOR ALL DIGITAL MEDIA CHART OF FALLING PRICES FSM DESCRIPTION  
OF GE FSM SYSTEM, UTAH FSM SYSTEM, DENVER FSM SYSTEM, NELSON'S FSM SYSTEM  
LIBRARY OF FSM 'PERFORMANCES' LIBRARY OF FANTASM CHARACTERS

----- ((1:40 AM 10 JULY))

INFO FACILITIES SUPPLEMENTING CREATIVE ENVTS THE MECHANICS OF SPRINGS,  
LIGHTING & HUSH SWOOP FEEL CAN WE VISUALIZE 4-D CUBE? CAN WE VISUALIZE  
CALHAMER BOARD? ADDITIONAL DIMENSIONS MORE DIMENSIONS THROUGH COLOR,  
SMELL AND SOUND MORE DIMENSIONS THROUGH SPRING-LOADING REVIEW OF MY  
VISION: GRAND LIBRARIES, SWOOPING SYSTEMS, TRUE EDUCATION, THE PRESERVA-  
BILITY OF THE HERITAGE INCOME-TAX HELP SYSTEM (ALTERNATIVES) CONVERGENT  
MEDIA VS. MERE ENGINEERING OPPORTUNITIES

----- ((1:48 AM 10 JULY))

HYPER-COMICS HYPER-POETRY THE DANGER OF SUDDEN ELECTRICAL DESTRUCTION I  
AM ASSUMING PEACE, OF COURSE HYPERSYSTEMS FOR EDUCATION IN THE UNDERDEVE-  
LOPED COUNTRIES THE SCATTERED CONSUMPTION OF SYSTEMS IN HOMES-- NOW TO BE  
UNIFIED CASSETTE-CAMERA TIMETABLE FOR INTRODUCTION OF COMPUTER DISPLAYS IN  
HOMES TRUE ACCESS TO NEWS THROUGH HYPERTEXT SYSTEMS TODAY'S ROCK MUSIC  
LIGHT SHOWS "MULTI-MEDIA"

23

----- ((8:20 PM FRI 11 JULY))

OL: DIGITAL CONTROL, COMP DISP., DIG. LIBRARIES 3-D 'TANK' RESPONSE  
QUALITIES MACHINES MUST NOT MAKE DECISIONS FAKE SCIENTIFIC VOTING-  
DISTRICTS WE MUST JOLLY WELL UNDERSTAND THE DECISIONS WITH WHICH MACHINES  
ARE ENTRUSTED WHAT IS A MEDIUM? VIABILITY OF MEDIUM IN SOCIETY WHAT IS A  
MEDIUM? VIABILITY OF MEDIUM IN SOCIETY CONCEPTUAL UNITY OF MEDIUM  
COMPONENTS COUPLED EVERY WHICH WAY NOW ELECTRICAL COUPLING OF COMPONENTS  
CONCRETE PHYSICAL COUPLING OF COMPONENTS MUSEUMS & FAIRS NOT GL. COMPU-  
TERS BUT SPECIAL INDUCTIVE & AXIOMATIC CREATION EXPOSITORY STRUCTURES  
BREAKING EXPOSITORY STRUCTURES THE NATURE OF WRITING THE NATURE OF IDEAS  
IDEAS AS ANNOTATED CONNECTIONS

((CLOSED 10:48 PM))

-----  
GOOD OLD SKETCHPAD I SKETCHPAD 3 TIME DISSECTOR FOR AUDIO, FSM 'TRUE  
STRUCTURE' SYSTEMS SECTION: THE MEANING OF STRUCTURED DATA SOOPER  
PREDICTION WHOPPEROD (SHORT & SUMMARY) WHAT'S COMING IS STRUCTURED MEDIA,  
NOT A HODGEPDGE TV ANALOGY BOOK ANALOGY ((1:15 AM 11-12 JULY))

-----  
CREATIVITY SYSTEMS TABLE OF MEDIA & THEIR CORRESPONDING CREATIVITY  
SYSTEMS MEDIA THAT HAVE FLOPPED PROBLEMS OF A MEDIUM CATCHING ON:  
MARKETING, COHERENCE, SIMPLICITY & CONVENIENCE MEDIA, ENVIRONMENTS, IDEAS,  
COMMUNICATION, FEEL. ((3:10 AM 11-12 JULY))

-----  
((INSERTIONS THURSDAY-FRIDAY 17-18 JULY 1969, STARTING 12:30 AM))  
FEELING-SPACES (INCL. MULTIDIMENSIONAL) CAN WE CONCEPTUALIZE MULTIPLE  
DIMENSIONS? THE HYPERCUBE DASHBOARD ENVIRONMENTS MULTI-DIM 'FEEL' CLUES:  
AUDITORY, PROPRIO, KINESTH, PUSH-PULL, BREEZE, COLOR, VIBRATION, STEREO-  
PHONY, VISUAL STEREO THE 4-D HYPERCUBE THE HOME TEXT CONSOLE UNIVERSAL  
HIGH-PERFORMANCE TEXT CONSOLES NEWS HYPERTEXT STRATEGIC INTELLIGENCE  
HYPERTEXT TEXT EDITING NON-FICTION HYPERTEXT SPHERE OF INTERCONNECTEDNESS  
IN A LARGE-SCALE HYPERTEXT WORK THE MYTH AND TRADITION OF NARROW COMPUTER  
USAGE, RIGID INPUT STRUCTURES (HARDLY SOPHISTICATED) WHAT COMPUTERS ARE  
(BRIEF EARLY REMARKS) TEXT SYSTEMS ((12:45 AM 17-18 JULY))

COMPLIMENTS OF THE

HYPERTEXT EDITING SYSTEM

CENTER FOR

COMPUTER & INFORMATION SCIENCES

BROWN UNIVERSITY

PROVIDENCE, RHODE ISLAND

18 JULY, 1969