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Fortics Scope Draft 7
22-3 Jy 69, 1 AM

dispatcher for print/punch

Name of contents: fantics, a book draft.

Arbitrary draft number: 1

This is data set "tej"

Print data set:

Date of this rollout: tuesday-wednesday 22 july 1969, 1 am

Description of work: melding of last live input (18-19 july). trimming and repunctuating the draft as it stands. removal of live input area from the draft itself; it will be filed historically outside the actual draft printouts.

Work systems: new procedures in general.

Various file streams will be melded with this project gradually, but over a period of time. they will go in as input, be 'rearranged' into position, and the scraps saved.

A buffered area for live input will be used, but it will not be in the main area. this does not make historical trails any more difficult.

Changes will be made directly in the manuscript, as well; a trail will be maintained between drafts by marking every paragraph that is changed or moved with the sign (((change:)))

Paragraphs which are in outline form will begin with the sign (((outline:)))

Sections which are in outline form will begin with the sign (((section outline:)))

Close control is necessary, especially to keep track of changes. indeed, it seems necessary to designate print drafts by number. count begins now; this is draft one. presumably the count will go to a's and b's within a given session of work.

Remarks: what the hell, let's write a book.

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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.

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----- ----- ----- ----- ----- 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))

----- ----- ----- ----- ----- ((3:10 am 11-12 july))

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((insertions thursday-friday 17-18 july 1969, starting 12:30 am)) ((12:45 am 17-18 july)) ((started 3:20 am, same night))

((fin 3:30))

((this is the input of fri-sat 18-19 july 69.))

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((outline:)) introduction xxx derivation of term "fantics": two useful roots, "fancin," to show, and "fantastein," to present to the mind of 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

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((manuscript is supposed to begin here))

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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.

(((outline:)))"the information explosion" "the knowledge industry" synnoetics cyberculture! media barrages media massages.

(((outline:)))sooper prediction whopperoo (short & summary) media, environments, ideas, communication, feel.

summary of my general prediction

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.

(((outline:))) ol: digital control, comp disp., dig. libraries the three basics computers can do for showing: storage, performance, control (dit 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.

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{((outline:)))what computers are (brief early remarks) 'most general machine' the myth and tradition of narrow computer usage, rigid input structures (hardly sophisticated)

it is generally supposed by laymen, and they have various reasons for supposing it, that computers are narrow and rigid. actually, any narrowness and rigidity of computers comes from the way they are programmed for use. in the early days it was much simpler to program them that way, and this narrowness has persisted as a tradition, a part of the culture of the computer world.

The computer is completely misunderstood by the general public. half-truths and unattractive publicity have succeeded in misleading people as to what computers are about. specifically, people think computers are mathematical and rigid, and while a case can be made for both these qualities, computers can be non-mathematical and non-rigid, as they are in all the systems to be described here.

It is necessary to explain what computers are. computers were called by von neumann the "all-purpose machine," a much more reasonable term. to remind the reader of this we ought to call them _apm's, but the word "computer" is too thoroughly entrenched. computers are all-purpose machines because their purposes and means of functioning are not built in, but are rather supplied by programs which can be changed. computers are all-purpose machines because they may be made to control all other machines, and do so in extremely complicated ways. thus any other machine can be made a part of a "computer system," and the whole system may be programmed to do many different tasks or parts of a big task through its component machines, under a single control. computers are all-purpose machines because their uses have not all been thought of yet.

(((outline:)))section: the ease of use

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{{{outline:}}}section: the fabulous world of computer display. or, "toys and jewels"

{{{outline:}}}machines must not make decisions fake scientific voting-districts we must jolly well understand the decisions with which machines are entrusted

{{{outline:}}}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

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{{{outline:}}}section: horizons for sale section: the myth of technicality section: the new-media whizbang xxx emperor's clothes xxx 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)

now is a time when everyone with some technical understanding is properly impressed with the potential for new media to communicate ideas and training. but this has led to the strangest variety of predictions, all under the same cloud. this cloud, which i see as obscuring the subject, i would refer to as the "myth of technicality." the myth of technicality is the idea that the development of media for presentation is a technical job to be left to "experts." i consider this idea pernicious and its results unfortunate.

i believe, on the contrary, that the creation of presentational systems is becoming a unified art and study, if it has not always been; and that the criteria for good presentational systems are not technical in any of the current senses, or technically measurable in any but a global sense, like love and war.

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(((outline:)))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

(((outline:))) 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

(((outline:)))convergent media vs. mere engineering opportunities

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hereafter everything is outline material.

(((section outline:)))

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

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(((section outline:)))

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 insile 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, it you let in enough variables

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(((section outline:)))

Computer-controlled media section: the computer as media controller

"multi-media"

Swell new presentational media, especially all-around-you sound, beautiful 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

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(((section outline:)))

Section: hyper-fantic media of various sorts

Hyper-comics

Hyper-poetry

Example: hyperfilm of wwii

(((section outline:)))

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: hyperqrams xxx brain project

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(((section outline:)))

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

Spatial hypertext environments: checkerboard, clouds (hanging in 3-space), swinging pages in 3-space

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(((section outline:)))

The general-purpose system toward which we are moving (line-drawing, moving-text)

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(((section outline:)))

The virtual space of a conceptual and display environment

dashboard environments xxx the mechanics of springs, lighting & hush

Feeling-spaces (incl. multidimensional) more dimensions through color, smell and sound more dimensions through spring-loading swoop multi-dim 'feel' clues: auditory, proprio, kinesth, push-pull, breeze, color, vibration, stereophony, visual stereo

Can we conceptualize multiple dimensions? the hypercube the 4-d hypercube can we visualize 4-d cube? can we visualize calhamer board? additional dimensions feel xxx response qualities

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(((section outline:)))

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 ascap copyright arrangements

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(((section outline:)))

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 creative process: creation of overall strux by induction/ extrapolation; threading on overall strux; comparing overall strux & corresp. items & contexts

The nature of writing the nature of ideas expository structures ideas as annotated connections xxx breaking expository structures

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(((section outline:)))

Creativity systems table of media & their corresponding creativity systems

Time dissector for audio, fsm

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(((section outline:)))

Section: text control systems cinenym

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(((section outline:)))

Interpersonal environments air controller envt handshake structures

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(((section outline:)))

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

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_____ _____ _____ _____ _____

This is the area for holds.

_____ _____ _____ _____ _____

Accounting structures the nature of accounting

_____ ((end of holds zone)) _____

Yyyyx

Yyyyx********** start **********

Compliments of the

HYPERTEXT EDITING SYSTEM

CENTER FOR

COMPUTER & INFORMATION SCIENCES

BROWN UNIVERSITY

PROVIDENCE, RHODE ISLAND

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