HOWTO PLIEGO (Read before printing :)

This is a "pliego", the smallest book possible, old Do-It-Yourself style!

HowTo print it: if your printer has a duplex printing feature, use it. If it does not, print first this page and place it again in the paper tray, so that it prints the other side of the sheet starting from here

HowTo fold it: follow these 3 easy steps, cut carefully by the dotted lines & enjoy!

Sheet 10 should touch 11 after the 1st folding, then 5 should touch 4, and finally 8 touches 9.

HowTo use it: once read, if you do not have the intention to collect this pliego with love leave it in a public place, so somebody else could read it :) You can download, comment or even create more pliegos at http://pliegos.net

The Memex

- An extract from Wikipedia -

Image: "Fractal art Swirl" by Ralph Langendam. At http://commons.wikimedia.org/wiki/File:Fractal_Art_Swirl.JPG under the public domain.

by speech synthesis. Considered together, these memex machines were probably the earliest practical description of what we would call today the "Office of the future".

"Given a memex, a scholar could create her own knowledge tools as connections within reams of information, share these tools, and use complexes of tools to create yet more sophisticated knowledge that could in turn be deployed toward this work. The memex has been envisioned as a means of turning an information explosion into a knowledge explosion. This remains one of the defining dreams of new media."

Extending, storing, and consulting the record of the species

could "... insert a comment of his own, either linking it into the main trail or joining it by a side trail to a particular item. ... Thus he builds a trail of his interest through the maze of materials available to him." A user could also create a copy of an interesting trail (containing references and personal annotations) and "... pass it to his friend for insertion in his own memex, there to be linked into the more general trail." As observers like Tim Oren have pointed out, the memex could be considered to be a microfilm-based precursor to the personal computer. The September 10, 1945, Life magazine article showed the first illustrations of what the memex desk could look like, as well as illustrations of a head-mounted camera, which a scientist could wear while doing experiments, and a typewriter capable of voice recognition and of reading text

microfilm storage, dry photography, and analog computing to give postwar scholars access to a huge, indexed repository of knowledge-any section of which can be called up with a few keystrokes."

The vision of the memex predates, and is credited as the inspiration for, the first practical hypertext systems of the 1960s. Bush describes the memex and other visions of As We May Think as projections of technology known in the 1930s and 1940s - in the spirit of Jules Verne or Arthur C. Clarke's 1945 proposal to orbit geosynchronous satellites for global telecommunication. The memex proposed by Bush would create trails of links connecting sequences of microfilm frames, rather than links in the modern sense where a hyperlink connects a single word, phrase or picture within a

being employed.

A proto-hypertext system

In Bush's 1945 paper, he describes a memex as an electromechanical device that an individual could use to read a large self-contained research library, and add or follow associative trails of links and notes created by that individual, or recorded by other researchers.

The technology used would have been a combination of electromechanical controls and microfilm cameras and readers, all integrated into a large desk. Most of the microfilm library would have been contained within the desk, but the user could add or remove microfilm reels at will.

The memex is "'a sort of mechanized private file and library'.Bush. It uses methods such as

establishing useful trails through the enormous mass of the common record. The inheritance from the master becomes, not only his additions to the world's record, but for his disciples the entire scaffolding by which they were erected. -- As We May Think

Bush states that "technical difficulties of all sorts have been ignored," but that, "also ignored are means as yet unknown which may come any day to accelerate technical progress as violently as did the advent of the thermionic tube." Indeed, anyone who stops to consider the performance consequences of trail following - let alone link-directed pointer-chasing - over a

microfilm library of near universal scope should quickly come to the conclusion that microfilm is no more appropriate a technology for implementing AWMT's vision than Jules Verne's cannon is an appropriate technology for sending astronauts to the Moon. In both cases the vision may be more significant than the specific technology used to describe it. See Michael Buckland's conclusion: "Bush's contributions in this area were twofold: (i) A significant engineering achievement by the team under his leadership in building a truly rapid prototype microfilm selector, and (ii) a speculative article, 'As We May Think,' which, through its skillful writing and the social prestige of its author, has had an immediate and lasting effect in

Extract on 1st September 2010 from http://en.wikipedia.org/wiki/memex under a CC-NC-SA license

so that one may follow a detailed matter from paper to paper, going back through the classics, recording criticism in the margins."

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The memex (a portmanteau of "memory" and "index", like Rolodex an earlier index portmanteau common at the time) is the name given by Vannevar Bush to the theoretical proto-hypertext computer system he proposed in his 1945 The Atlantic Monthly article As We May Think. The memex is a device in which an individual compresses and stores all of their books, records, and communications which is then mechanized so that it may be consulted with exceeding speed and flexibility. A document can be given a simple numerical code that allows the user to access it after dialing the number combination. Documents

are also able to be edited in real-time. This process makes annotation fast and simple. The memex is an enlarged intimate supplement to one's memory. The memex has influenced the development of subsequential hypertext and intellect augmenting computer systems.

A memex consists of a desk, where on top are slanting translucent screens on which material can be projected for convenient reading. Within the desk were mechanisms that stored information through microphotography. Most of the memex contents are purchased on microfilm ready for insertion. On the top of the memex is a transparent platen. When a longhand note, photograph, memoranda, and other things are in place, the depression of a lever causes it to be photographed onto the next blank space in a section of the memex film, dry photography

document and a local or remote destination.

Associative trails

An associative trail as conceived by Bush would be a way to create a new linear sequence of microfilm frames across any arbitrary sequence of microfilm frames by creating a chained sequence of links in the way just described, along with personal comments and side trails. At the time Bush saw the current ways of indexing information as limiting and instead proposed a way to store information that was analogous to the mental association of the human brain: storing information with the capability of easy access at a later time using certain cues (in this case, a series of numbers as a code to retrieve data). The closest analogy with the modern Web browser would be to create a list of bookmarks to articles relevant to a topic, and then to have some

mechanism for automatically scrolling through the articles (for example, use Google to search for a keyword, obtain a list of matches, and then use "open in new tab" in your browser and visit each tab sequentially). Modern hypertext systems with word and phrase-level linking offer more sophistication in connecting relevant information, but until the rise of wiki and other social software models, modern hypertext systems have rarely imitated Bush in providing individuals with the ability to create personal trails and share them with colleagues - or publish them widely.

Other features

The memex would have features other than linking. The user could record new information on microfilm, by taking photos from paper or from a touch-sensitive translucent screen. A user

Bush's idea for the memex extended far beyond a mechanism which might augment the research of one individual working in isolation. In Bush's idea the ability to connect, annotate and share both published works and personal trails would profoundly change the process by which the "world's record" is created and used:

> Wholly new forms of encyclopedias will appear, ready made with a mesh of associative trails running through them, ready to be dropped into the memex and there amplified. The lawyer has at his touch the associated opinions and decisions of his whole experience, and of the experience of friends and authorities. The patent attorney has on call the millions of issued patents, with familiar trails to every point of his

client's interest. The physician, puzzled by a patient's reactions, strikes the trail established in studying an earlier similar case, and runs rapidly through analogous case histories, with side references to the classics for the pertinent anatomy and histology. ... The historian, with a vast chronological account of a people, parallels it with a skip trail which stops only on the salient items, and can follow at any time contemporary trails which lead him all over civilization at a particular epoch. There is a new profession of trail blazers, those who find delight in the task of

stimulating others."

In "Memex: Getting Back on the Trail", Tim Oren argues that Bush's original vision expressed in AWMT describes a "... private device into which public encyclopedia's and colleague's trails might be inserted to be joined with the owner's own work."

However, in Bush's manuscript draft of "Memex II" of 1959, Bush says, "Professional societies will no longer print papers..." and states that individuals will either order sets of papers to come on tape - complete with photographs and diagrams - or download 'facsimiles' by telephone. Each society would maintain a 'master memex' containing all papers, references, tables "intimately interconnected by trails,

so that one may follow a detailed matter from paper to paper, going back through the classics, recording criticism in the margins."

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