

HES

Ted Nelson's 1966 Xanadu Manifesto

From the point of view of the system's actual design, however, these particular subjects and facts are unimportant. The parts that have to be designed into the system are more like the following:

1. **Text editing.** Contains texts may be modified swiftly with such instructions as "insert," "delete," "move," "copy."
2. **User-defined file structure.** The user may define his own information types and links, and the way the machine will store and handle them. These may range from an outline form to multi-part linked units.
3. **User-defined workspaces and file disciplines.** The user may define such abstract working arrangements as push-down stacks, temporary holding holding spaces, "holders," indexes, and windows into his file. He may even specify overall file disciplines that the system will thereafter hold him to.
4. **User-defined screen layouts.** The user may "varse" the screen into separate areas where his files and workspaces will appear.
5. **User-defined branching utilities.** The user may arrange interchanges between various presentations by drawing branch graphs, and specifying the conditions under which the machine is to branch; these may include thesauri, pushdowns or screen pointing. This branch-defining technique may be used either for creating work-systems or for defining hypertexts.
6. **User-specified screen presentation codes.** The user may have text segments or screens presented as frames, drum rolls, and streamers; and specify which are to blink, how brightly, and when.
7. **Continual Modifiability.** The system a person is using may be modified at will.
8. **Reversible processes.** Both text and modified line commands may be stored in such a way that changes can be undone as far back as records are kept.
9. **Exhaustive text integration.** Alternative versions may be spun off, and linked to each other so that their corresponding parts may be compared.
10. **Complex indexing.** The system will have a complex indexing ability for either straight text complexes, permitting the creation of any number of indexes for a given body of information, from which the user may immediately jump to the information being indexed. This indexing facility permits the use of lists or trees to index one another, so that the user may proceed to a corresponding part in the other text or listing. This may be regarded as "backward" and "forward" indexing, but that implies a priority which may not

necessarily exist in the material.

11. **Alternative drafts.** The system will also have the ability to store alternative drafts of either straight text or text complexes.
12. **Search.** There will also be a word search facility, with which the user may look for the occurrence of specific words and phrases, tally them, index them, process them, etc.
13. **Complex Connecting Structures.** Such connective facilities as super-structuring, the ability to attach text chunks to an arbitrary text and have them available under many different categories; parallel texts, whose arbitrary texts are linked side by side so that they may be compared or their relations noted; array formats, whose other types of information may be stored in matrices and graph structures; and a cross-jumping facility, enabling the user to jump from a given part of the text to any linked part of the text.
14. **Storage and Printing.** The system will be able to sort and arrange the materials it contains, and produce printed reports on demand, even interactively with a user. This will make possible catalogues, concordances, quick indexes and annotated manuscripts with some swiftness.

