

Computer Indexing with Random Sequential Storage

145. The essential feature of such a system would be the storage of all material (both letters and telegrams) in the order received by the Registry, using computer indexing to locate material whenever needed. Users would only receive subject files constructed on request and made up of copies of the material in the file. The "hard copy" might also be placed on microfilm or video-tape. This approach could employ either centralized or Bureau Information Control Office indexing. It would be unworkable with the Kard-veyer indexing procedures as at present maintained, which perhaps is in itself an indictment of the latter. The arguments against adopting the random storage approach at this time are presented in part in paragraph 69 in discussion of the general conclusion that "subject files" in one form or another should be retained. In addition to the benefits in the retention of subject files it should be noted that it could become very difficult to go back to a system of subject files once the step has been taken to use random storage. Thus, while this option presents a perhaps elegant theoretical solution, it carries some risk of practical operational difficulties and the distinct disadvantage of being a sort of one-way street which, once entered, would be difficult to leave even if a new direction could be seen to have become more attractive. The dynamic design of the "Preferred System" does not preclude altering course to random storage at some future date without undue disruption.

Full-Text Computer Storage

146. On close examination this approach can be seen to be a more advanced version of random sequential storage discussed above. Some additional comments are relevant. While a highly responsive system could no doubt be devised, based on full-text storage, it is clear even without working out detailed specifications that only a large computer with extensive storage capacity would be capable of handling the full texts of all material. While all telegraphic material could be acquired through the message switch there would be problems about placing the texts of the large volume of other material in a storage form available to the computer. Only very expensive optical character recognition devices can at present handle a variety of type fonts; and magnetic card or magnetic tape typewriters could only be used for material originating in the Department itself. As a practical matter it would seem that non-telegraphic material would have to be photocopied so that action could proceed while the process of placing it in computer storage was set in train. There is also the question as to the best technique to be adopted for presenting "files" to meet users' requests. Lacking any certainty that full text computer storage would provide superior service, and given the high cost and practical difficulties, this option must be rejected for the time being. It is nevertheless recognized that the state of the art may advance sufficiently to render full-text storage feasible in the Department some years from now. As in the case of the immediately foregoing option, the "Preferred System" could lend itself admirably to development towards "full-text computer storage" if that should be the way of the future.

Other Systems

147. The exploitation of modern technology for information storage and retrieval has advanced quite far in a number of institutions in Canada and elsewhere. To cite a few there is the SDI system developed by the NRC; Quicklaw developed by Prof. Lawford; several large bibliographic data banks in the United States; the New York Times Data Bank; the University of Toronto on-line library cataloguing service. Most of these were found not to be directly relevant to the