In the past year, the primary concern of the Demotic Dictionary staff has been the production and verification of the thousands of facsimile copies of words to be included in the Dictionary. As is true for most dictionaries, the Demotic Dictionary will be consulted much more often for "spelling" of a word than for "meaning;" and "spelling" can be especially tricky in a heavily ligatured script derived, ultimately, from the hundreds of hieroglyphs. Given the importance of accurate copies of words for decipherment, and for the study of geographical, temporal, and individual scribal peculiarities, we devised a method for producing copies which relies as heavily as possible on mechanical reproduction (especially Xeroxing). But in those cases where the quality of the published photograph of a text is insufficient for mechanical reproduction, we have been making hand copies. To make such hand copies is a slow, painstaking, and frequently difficult task. The copyist must distinguish in the photograph between intentional ink marks (sometimes quite distorted due to partial flaking away of the ink) and papyrus fibers or holes or shadows in the papyrus. In addition, the copyist must try to reproduce the original stroke thickness and ductus (the direction in which the signs were written).

Such work progresses slowly, especially with our currently reduced staff which includes no full-time members. Copies have been completed for the 251 Dictionary draft pages comprising the letters aleph, i, y, ayn, and w and a beginning has been made on the first twenty pages of b. The total quantity of completed hand copies now numbers over 2,000, though many of these await final checking. While this represents a good beginning, it is now estimated that the final number of facsimiles will well exceed 10,000.

But just before this report was submitted, a technological improvement was acquired which may well speed up the process of making the copies from poor photographs while increasing the accuracy of those copies. At a "Macintosh Fair" held on campus this spring, Jan Johnson won the raffle prize—an Apple Scanner donated by the Apple Corporation. A scanner is a device which makes a picture of a document (as a Xerox machine or a camera does) and stores it in a computer. This digitized picture—not unlike
photographs taken from satellites—can be enhanced; i.e., the contrast and brightness can be adjusted. Thus a published halftone photograph can be saved as such or converted into a line drawing. The scanner is very easy to use—you simply put your photograph face down on the flat glass surface of the machine (as with a Xerox machine), change any settings you want to change (the program lets you “preview” all these changes, so that you can easily see which settings are the best for your photograph), and tell the machine to make the “scan.”

An example of a “scan” is found in figure 1. On the left is a halftone “scan” of the first six lines of Papyrus Berlin 13543; on the right of the same figure is a “scan” of the same six lines treated as a line drawing. P. Berlin 13543 is a letter written in Elephantine, at the first cataract, during the Ptolemaic period. The writer of this letter, a man with the Egyptian name Nes-Khnum-pamety, the son of Nes-Neb'onkh, is writing to a man with the Greek name Herakleides, whom he addresses as the chief administrator of the southern part of the country (lit., “He of the Southern Region”). Nes-Khnum-pamety is requesting that Herakleides intervene on his behalf with the “Overseer” of Thebes, to whom he has sent 20 units of silver, so that the “Overseer” of Thebes will appoint Nes-Khnum-pamety to be the lesonis (senior economic officer) of the temple of Khnum in Elephantine. This much of the letter is included in the two “scans” found in figure 1. The rest of the letter is a promise to send 5 (more) units of silver to the “Overseer” of Thebes within the next year. As noted by the editor of this text, although the 20 units of silver which had already been sent to the “Overseer” of Thebes were the normal fee paid for accession to the position of lesonis, the extra five may well have been a bribe.

Figure 1: Papyrus Berlin 13543, lines 1-6.
Although the halftone "scan" gives a much better "feel" for the papyrus, the "scan" as a line drawing can easily be "cleaned up" to remove extraneous lines, both the fiber lines of the papyrus and bits of ink or stain which are not part of the inscription in question. This technique provides copies of individual words which can then be "lifted" from this scan into the pages of the Dictionary itself. For example, at the left end of the second line of text occurs the title $Pa-t\bar{s}-st(y.t)-rsy$ "He of the Southern Region." This example will be quoted in the Dictionary as a specific title under the general term $T\bar{s}-st(y.t)-rsy$ "The Southern Region;" see figure 2. In those cases where the published photograph is good enough (e.g., Papyrus Berlin 15522, line 5) that a photocopy shows the word clearly, we shall continue to use photocopies. It is preferable to use such photocopies because they are quick to produce and they provide a mechanical copy into which no member of the Dictionary staff has intruded any interpretation of reading, shape of signs, or the like. In cases where the published photograph is difficult to read, or where a photocopy is unclear, we have been making the painstaking facsimiles whose production was described last year. Now we have the option of using a copy from a scan (as in Papyrus Berlin 13582, line 3, and Papyrus Berlin 13543, line 4).

The choice between hand copy and "scan" will depend on the relative reliability of the two types of copy and the length of time it takes to produce them. In many cases, it is relatively easy and quick to make the hand copy and we will continue to make such copies. In other cases, the published photograph
is so poor (either dark or faint) that we have not been able to produce a satisfactory hand copy. We have just begun to experiment with such difficult copies, but already in one case we were able, using the scanner, to enhance the contrast of the published photograph and produce a possible copy using the scanner of a word for which we otherwise would not have been able to include a copy.

If we decide to make "scans" of a large number of documents, there will be an added side benefit. Once a text has been scanned and the copy saved on the computer, anyone with access to the computer (by walking into the Demotic Dictionary office at the Oriental Institute or by "calling up" the Dictionary computer on the telephone) will be able to "pull up" the text at will. It will become much easier to include citations from texts in future articles and books and, perhaps as important, it will be possible for people at institutions without the excellent library facilities of the Oriental Institute and the University of Chicago to have quick access to the texts simply by telephoning Chicago. In theory, museums could include photographs of all their papyri within such a corpus, so that a scholar in Oxford could consult a text in the Louvre (but would lose the good pretext for a trip to Paris). Of course, looking at a computer "scan" will never replace looking at an original document, but for quick reference, and to determine whether a certain text is going to be helpful in resolving a particular question, the more Demotic texts which are available "on-line" the better.

Jan Johnson, Editor, and Robert Ritner, Associate Editor, continued to proofread and upgrade the body of the Dictionary itself as well as oversee the production of all hand copies and check the final products for accuracy. The often tedious work of making the facsimiles—with concomitant eye strain and copyists' cramp—was performed with accuracy and sustained good humor by Joe Manning, John Darnell, and Drew Baumann. Sally Zimmerman has continued her diligent stylistic review of our burgeoning manuscript and pruned it of many inadvertent inconsistencies. George Hughes has remained a guiding force for the project, and his advice and encouragement has often proved invaluable. Mutual benefit has also resulted from the extended visit in Chicago of the Demotist Professor Ursula Kaplony-Heckel of the University of Marburg, West Germany, who has conducted research on legal oaths and land texts from the Ptolemaic period and has been in Chicago studying the ostraca excavated by the Oriental Institute during our excavations at the Theban temple of Medinet Habu.