benefit. The PCD–Maltron keyboard allows operators to use it with either the qwerty letter layout, or with the Maltron Mark II letter layout as they wish. The changeover to the new design can be made quickly and easily and requires only from five to 10 hours' practice. High speed operators who have tried this have said that this changeover is easier than moving from a standard typewriter to an electric one. The index fingers have most relearning to do because the awkward and uneven stretches to the centre rows have been eliminated.

Fig 2
PCD-Maltron keyboard with mag tape output and visual display unit

Changing to the new design only, will eliminate physical discomfort and will allow for increased lateral keying speed–where the qwerty letter layout permits of lateral keying. An increase of around 25% in keying speed may be anticipated.

Learning to operate a keyboard with a new layout does present more difficulty–or rather it does require more practice. It is very like learning to speak a second language. The quickest way to do this is not to speak the first language at all. But that is not the only way and most people who speak more than one language have learned to do so whilst still speaking a first language. Many thousands of Linotype operators who have learned to operate qwerty while still operating on the Linotype layout can testify to this. This makes it possible for operators to spend several hours a day learning the new keyboard language, while still producing on the qwerty machines.

Because the Maltron Mark II layout fits language requirements and has relatively few slow and difficult movements, it seems to be easy to learn. The first Maltron Mark II layout appeared on a keyboard on 19 May, 1977 and there are at the time of presenting this paper for printing, no figures available for completed training. If the statistics are anything to go by, high keying speeds with high accuracy should be attained in relatively short training times.

8 Conclusion

There are two main reasons why the developments in keyboard design and layout described in this paper could not all have been made before the electronic era. It is only very recently that the technology has made it possible to fit a keyboard with the irregular shape of the PCD–Maltron. The equipment required to permit the flexible interchange from one keyboard layout to another is also very new. Great credit is due to Stephen Hobday of PCD Limited for seeing the possibilities and using them so inventively. In addition, computer printouts for language analysis make it possible to search and sort in months rather than in years.

It remains to be seen whether the massive keyboard population will take advantage of these technological developments in the short term, rather than in the long term.

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