Setting interactive movable type

The principal working parts of the interactive movable type software will be two new algorithms: (1) *the annotation algorithm* ("the writing algorithm") and (2) *the formation algorithm* ("the reading algorithm").

How the annotation algorithm will be used in setting mutext:

The annotation algorithm will be used to combine, in a single text file, text that has been set in six different display formats, namely: the conventional linear format, a 1-line mu format, a 2-line mu format, a 3-line mu format, a 4-line mu format, and a 5-line mu format.

To set text in interactive movable type, the "musetter" (the person setting the text, who will often be the author of the document) will take any body of text in the linear typography and add the five mu formats in the following way:

(1) The musetter will transform the linear text to 1-line mutext by simply inserting a "mumarker" (one key designated as such on the keyboard) after each word or series of words that he or she has selected as muglyphs in the sentence.
(2) After the body of text has been broken into 1-line muglyphs and saved, the musetter will ask the annotation algorithm to reset the text as 2-line mutext and display it in that format. The musetter will review the text displayed in the 2-line mu format, make appropriate adjustments, and then save it.
(3) The annotation algorithm will then be asked to reset the 2-line mutext and display it in the 3-line mu format. The musetter will then review the text in the 3-line mu format, make appropriate adjustments, and save it.
(4) The annotation algorithm will then reset the 3-line mutext and display it in the 4-line mu format. Then the musetter will review the text in the 4-line mu format, make appropriate adjustments, and save it.
(5) The annotation algorithm will then reset the 4-line mu text and display it as 5-line mutext. Again, the musetter will review the text in the 5-line mu format, make appropriate adjustments, and save it.

In performing its functions as "the writing algorithm," the annotation algorithm will combine linear text and the same text set in the five mu formats into a single text file encoded in a special format, *the mudoc digital format*. To generate the combined file set in this format, the annotation algorithm will convert each of the mumarkers inserted by the musetter into one of the 48 "musensors" that will be employed by the formation algorithm in delivering text to the consumer. Musensors are the special characters in mutext files that the formation algorithm will use to satisfy the wishes of each consumer in delivering and displaying the text in any of the six formats incorporated in text set in interactive movable type.

Text set in the mudoc digital format will require little or no more storage space than text set in the conventional linear format.

How the formation algorithm will read mutext and deliver it to consumers:

As "the reading algorithm," the formation algorithm's role will be to read and interpret the encoded text that has been generated with the annotation algorithm – and then display that text in whatever way the consumer wants – either as a static display in any of the six mudoc formats or as a muvie in any of the five mu formats.

The basic annotation algorithm has been formulated, but it needs to be formalized and turned into a specific application for a specific computer platform using a specific operating system before the formation algorithm can be "taught" to read and deliver the encoded text files that have been generated by the annotation algorithm. Thus, completing the development of the basic interactive movable type software will be a two-step process – first the writing step – and then, the reading step. As outlined above, the logical procedures and editing steps to be followed in the writing step seem to have been satisfactorily worked out. The next step, the reading of the encoded text by the formation algorithm, presents no particularly difficult problems to be solved in developing it so it will perform all the functions needed to present the text in any of the ways desired by the consumer.

The formation algorithm will enable each user to manipulate and display text set the mudoc digital format in whatever ways will optimize his or her own particular perceptual and cognitive capabilities. This means that those with severely limited capabilities will be able to perform at dramatically higher levels than they can today. But, it also means that even the most capable individuals will be able to perform at substantially higher levels. Through the use of this "reading" algorithm – and aided with the audio tools and the mudoc reference substructures and other linguistic tools of the mudoc technology – all readers will be able to achieve higher levels of efficiency and effectiveness in the assimilation and understanding of the information provided by the words and characters in the text.

Initially, the annotation and formation algorithms will be developed for use with English. Later, versions will be developed for use with the other natural languages – first with the Indo-European and other phonographic languages – and then with Chinese and the other logographic languages. After development of the algorithms for use with natural languages is underway, the development of a new kind of computer language will be initiated – a computer language that can be used like a natural language. The chapter "Languages of the Future" in *The Mu Primer* manuscript, which is available at http://www.mudoc.com/mpms4.htm , discusses the nature, functions, and advantages of such a human-computer language.

The implementation and use of new linguistic tools like the annotation and formation algorithms may substantially improve the usefulness of the languages we now use in dealing with today's problems. They will help digital publishing fully realize its great promise. And, the advent of human-computer languages, along with new delivery tools like the telereader terminal*, may help transport humankind into a far more productive and fulfilling era of linguistic empowerment.

***** For information about the telereader terminal, see "Tomorrow's Screenless PC" at http://www.mudoc.com/screenlesspc.htm , and "The Classroom of Tomorrow: An Educational Wonderland" at http://www.mudoc.com/newclass.htm , and other pertinent pages at mudoc.com.