

1056-K1-1810 **Susan L. Addington*** (saddingt@csusb.edu), Math Dept., CSUSB, 5500 University Pkwy., San Bernardino, CA 92407. *Retrieving old mathematics with new technology.*

Marshall McLuhan noted that a new technology often *retrieves* things which were previously obsolete. This talk presents online mathlets that support a book in progress, by David Dennis, on the history of our secondary math curriculum.

Old mathematics is difficult to understand because mathematicians thought differently then, and because communication technologies were different. For example, Euclid's and Apollonius's work was in written form, but without algebraic symbols and without diagrams. This mathematics is much more understandable with 2D and 3D dynamic geometry.

The work of John Wallis was key in the development of the calculus. However, his work uses tables of characteristic ratios rather than algebraic integrals. Wallis' work becomes much clearer with interactive tables linked with dynamic geometry.

The mathlets are mostly in GeoGebra, with a few in Cabri 3D. GeoGebra is a dynamic mathematics program that features linked geometry, algebra, and a spreadsheet. It is easy to create geometry with a mouse. More complicated sets of geometric objects can also be created by small programs in the input bar. Because GeoGebra is written in java, mathlets appear on the web exactly as designed. (Received September 22, 2009)