Abstract

Imaging systems, illumination tools, and processing methods newly developed in the last 2-3 decades have dramatically improved recovery of text and other features from manuscripts. As a result, heretofore unreadable (or even unknown) texts may be recovered, which promises a possible new age of scholarship in cultural heritage. Among the objects that have been studied using such emerging methods include manuscripts that were deliberately erased and overwritten to form "palimpsests," including manuscripts with erased writings by Archimedes, Galen, and Dexippus. In another example, faded text was recovered from the c. 1491 map of the world by Henricus Martellus Germanus. This talk will review new imaging equipment, including illumination, lenses, and sensors, as well as processing methods that have been applied to the imagery of these objects. Long-range plans for wide dissemination of equipment and expertise will be described.

Short CV

Roger L. Easton, Jr. has been on the faculty of the Chester F. Carlson Center for Imaging Science since 1986. During that time, his research interests evolved from optical signal processing and holography to the application of modern imaging technologies to recovery of writings from cultural heritage. He led the imaging team for the project to recover erased text from the Archimedes palimpsest, which led to discoveries of writings by Hypereides and a commentary on Aristotle's "Categories." He was also on teams to image the Syriac-Galen, Dexippus, Jubilees, Zacynthius, and Herodian palimpsests and the palimpsests in the "New Finds" at St. Catherine's Monastery, as well as maps of the world by Henricus Martellus Germanus (c. 1491) and Martin Waldseemüller (1507).