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*Weaving Mathematics.*

Technology has oftentimes advanced the arts by providing improved, and sometimes revolutionary methods with which the artist can achieve new levels of expression. One notable example was the Jacquard loom of 1804. This presentation will include a detailed illustration of the mechanics of the Jacquard loom, a discussion of its importance not only to the weaving industry, but also to computer design more than a century later, and an examination of notational methods used to specify weaving patterns. This leads naturally to mention of the binary number system and Boolean algebra. Finally, a variety of weaving examples will be shown and a simple virtual weaving program used to create some surprising designs based on mathematical inputs. (Received August 26, 2008)