

Title:

Making Core Memory

Organizer(s):

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Key Participants:

See organizers

Abstract: 150 words

The computers for the Apollo moon missions stored information in core memory ropes—threaded wires passed through or around magnetized metal rings. NASA engineers nicknamed this hardware “LOL memory” for the “little old ladies” who carefully wove the wires around the ferrite cores by hand. The proposed session uses this moment of engineering history to examine the embodied, gendered forms of knowledge that contribute to information technology innovation. We do this in an interventionist project of collaborative inquiry that materializes the work of core memory weaving. Participants receive a “patch kit” that contains a simple chipboard matrix, beads and yarn (in place of cores and wires). The completed patches are attached to a quilt that then shares historical audio about the core rope created for Apollo Guidance Computer. Core rope memory transformed software into hardware. When digital information is made material, it helps us to see the hands that bring technology into being.

Description: A description of the event of up to 1,000 words, addressing each of the following

Purpose and Intended Audience: With this project, we hope to gather an audience of students, educators and scholars of information and information science from a variety of disciplinary and methodological backgrounds in order to widen the stories told in and through computing histories. During the workshop, we allow participants to imagine new ways of making, remembering and performing engineering histories. Our intention is not only to bring the work of women back into histories of innovation, but also use these processional histories to recreate our relationship to technology.

Proposed activities including agenda, development and follow-through:

Making Core Memory is a workshop that engages participants in the story of the core memory weavers through material encounters with artifacts, production process, and history of core memory technology. Each participant receives a kit containing a 5-inch chipboard loom, yarn, beads, a plastic needle and materials to make a basic copper tape switch. Through the workshop, we invite the participants to partake in a weaving process akin to that of the core memory weavers. Once the weaving is finished, participants attach their completed patch to the Core Memory Quilt. Connecting a finished patch to the quilt squares completes an electric circuit, allowing the quilt to play an audio recording about the history of the Apollo Guidance Computer project. Connecting a patch also triggers the Core

Memory Quilt to tweet a 120-character version of the clip from @lolweavers account. The 120 characters reflect the storage capacity of actual core memory planes that are also installed on the quilt.

The event will be documented through photographs and fieldnotes, and we will include follow up material and reports on our project website (makingcorememory.com).

Relevance to the Conference/Significance to the Field:

The Making Core Memory project appeals to participants by engaging them in interactive activity while sharing an untold history of information storage during the Apollo moon missions. The story of core memory production is surprising. The greatest engineering feat of the last century required the seemingly anachronistic method of hand-weaving. Rather than a quaint workaround, we present this craft-based form of construction and “women’s work” as legitimate means of technology making.

The workshop radically challenges accepted understandings of technology development to bring attention to the production practices that constitute innovation. In doing so, we foreground alternate methods of technology making and center figures that too often occupy the margins of technology history. We implore iSchool educators and students to think differently about how one participates in technology culture and expand accepted imaginaries of who is an innovator.