CODING APOLLO

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Postcard of Margaret Hamilton, standing next to the navigation software that she and her MIT team produced for the Apollo Project, displayed at Digital Frontiers 2019. Photograph by Beth Hinners, September 2019
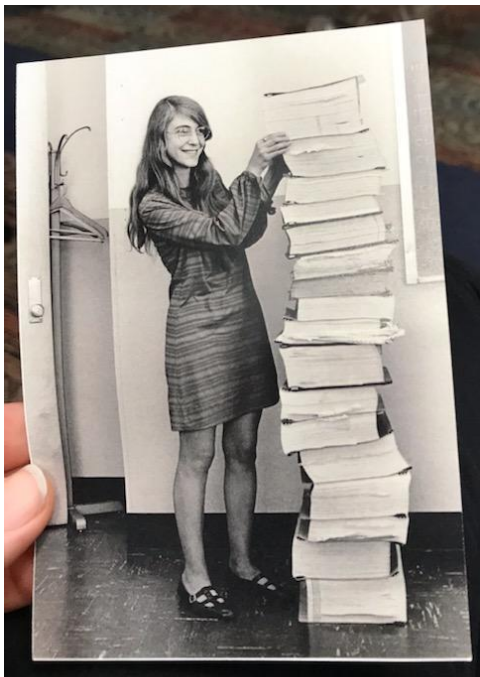
Description

An evocative image was the impetus: foregrounding the leader of a team that wrote the code; highlighting the connection between labor and the journey to the moon; a visualization of the product of labor that made that journey possible.

This project connects the code and planning documents that animated the Apollo mission to audio and video of the event, creating a unique time-based public interactive installation.

It questions the distinction between "software" and "hardware", asserting the mutual and inextricable entanglement between the two factors.

It highlights the industrial efforts and scientific techniques required to produce a single event. It produces an experience of infrastructural intelligibility, highlighting the connections amongst diverse elements required to bring the experience of the lunar landing to fruition.

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Materials

Three channel video installation
Three vintage CRT monitors
Three Raspberry Pi 4 Single-Board Computers
Lamp; 5v relay
Code from Apollo Guidance System (AGC)

All media from this project – text, footage, diagrams, illustrations, code – were drawn from the archives of entities connected with the Apollo missions. The mission briefings, audio recordings, footage and other material were extensively indexed. Each command would be spoken aloud in preparation, and again in execution. All commands were logged, all audio and visual materials recorded, transcribed and indexed.

The materials not only assist the authors in production of a multi-channel installation; they lend themselves to an endeavor in infrastructural intelligibility.

The Experience

Figure 2. Three CRT monitors, displaying the materials of the reflective loop, displayed at Digital Frontiers 2019. From right to left: diagrams, footage, documents. Photograph by Beth Hinners, September 2019.

A bank of three transistor-age CRT monitors wired into the Coding Apollo system run in two loops: one is active, one is reflective (fig. 2). The interactor experiences a multimedia demonstration of the centrality of code to the Moon Landing.

The active loop is set into motion by pressing a small red button on the nearby music stand.

A lamp illuminates code P66, which ran on the AGC Lunar Excursion Module (LEM) guidance system during the moment of lunar landing (fig. 3).

On the monitors, mediated images of the event play; footage from Mission Control and the LEM; documents and diagrams from the mission report.

The reflective loop runs before (and after) the active loop. Composed of text, diagrams, and audio-visual renderings from the Apollo mission, this associative montage highlights the labor necessary to produce the landing.

The active loop foregrounds the moon landing as event; the reflective loop foregrounds the moon landing as an undertaking – planning, training, development of technology and procedures. It is hoped that the juxtaposition between the reflective and active loop, through the logic of association, produces an opportunity to reflect on the inextricable entanglement between the event and the labor necessary to produce it.

Figure 3. Lamp, music stand, button, code, postcards; part of Coding Apollo, displayed at Digital Frontiers 2019. Photograph by Beth Hinners, September 2019.