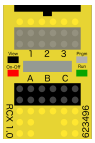
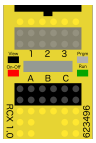


About FaRCX

John Holbrook, Philip Taylor



Overview

FaRCX is software for controllowing a LEGO®RCX robot over the internet with one or more live video feeds. The software is open-source and runs on modern Linux systems. The project is a spiritual successor to *Red Rover, Red Rover*, a late-1990s project of LEGO and The Planetary Society. A permanent "Mars Rover" (actually located in Huntington, WV) can be driven online at http://farcx.com.

Previous Software

A previous software package, *Red Rover, Red Rover*, also allowed for teleoperation, but had several limitations:

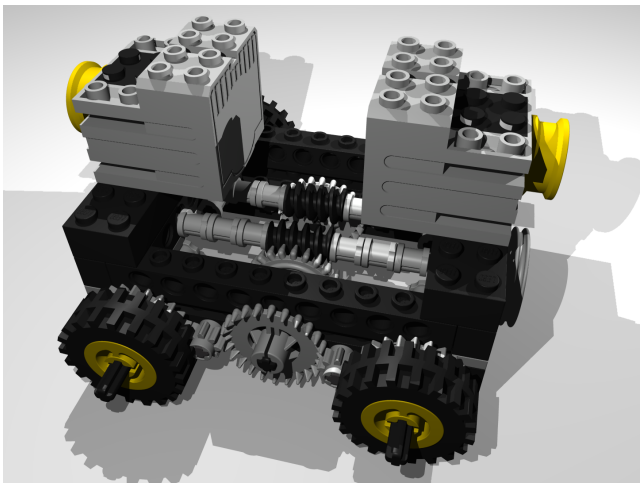
- *RRRR*, developed in 1998 for The Planetary Society, had long since been abandoned as a coordinated project.
- Server software was Windows-only, and unsupported on recent versions of Windows.
- Video was limited to a single camera, and limited to still images transmitted during control sequences (otherwise static).
- Control web page design was clunky and difficult to navigate.

In the early 2000s, as many as one dozen *RRRR* deployments, located around the world, were available online. FaRCX was designed to replace the last known *RRRR* deployment, originally maintained by Linda Hamilton of Marshall University. The FaRCX software took control of the rover model in January 2015.

Advantages of FaRCX

- Project is open-source, with continued support.
- Software stack designed to run on Linux, but could be reatively easily adapted to run on other platforms.
- Video is live-streamed at variable frame rate (4 FPS used for remote rover), and multiple cameras can be utilized (onboard, third-person view, etc.)
- Control web page written to comply with modern HTML standards.
- Control of robot is achieved by sending easily-decipherable POST requests to a server, so other means of control (scripts, smartphone apps, etc.) could easily be developed.

Photos



DRIVE OUR ROVER AT HTTP://FARCX.COM!