Softwareproject: Internetcommunication

Reactiongame for with Magnetic Tape Machine

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Motivation

The intention of this project was to revive the PDP11 Servers in figure 1 located in the Freie Universität Berlin, in such a way that they brighten the hallway. Such that, despite the original purpose is gone, students can still enjoy it and are inspired to upcycle hardware on their own.
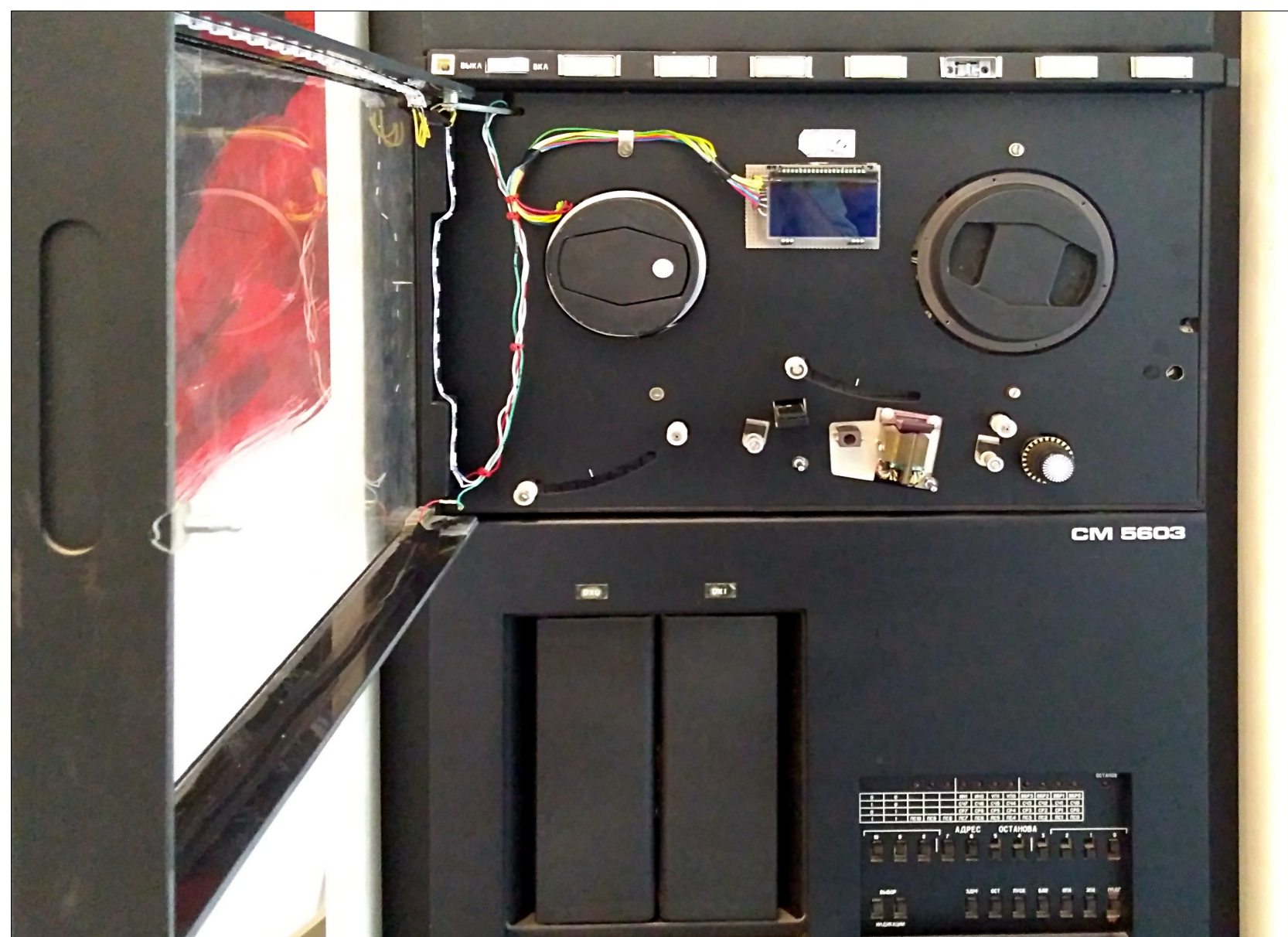

Figure 1: PDP11 Server Racks with converted Magnetic Tape Machines

The Hardware

The Mainboard in figure 2 combines the Microcontroller samr21-xpro which manages the Hardware, a multiplexer for the buttons, an H-bridge for driving both motors, an LCD and an Stripe with WS2811-compatible LEDs. From an ATX-power supply it draws 12V and 5V via a Molex plug. Additionally a Strip connects the board to the LCD and the LED-Stripes on the front.
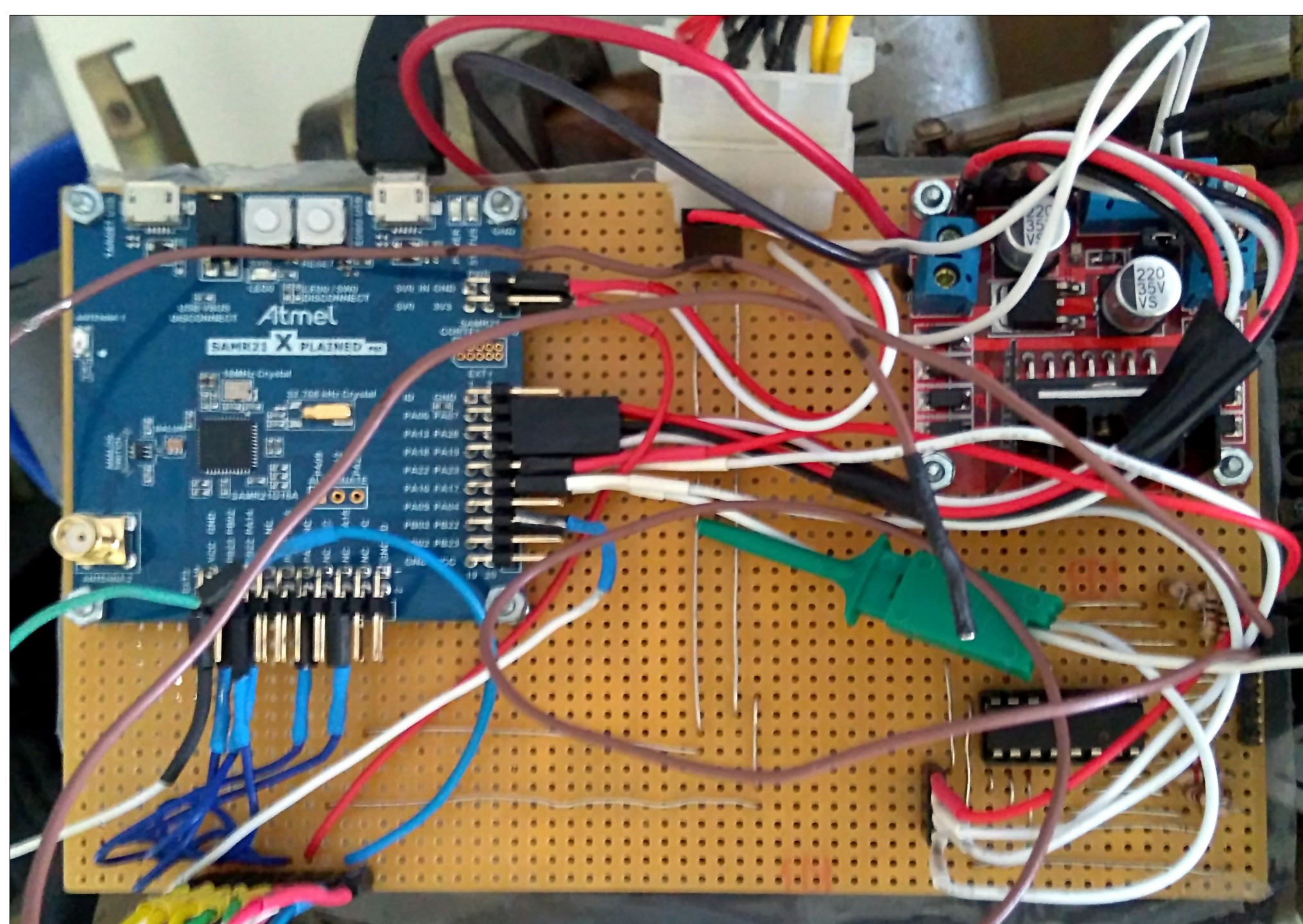

Figure 2: Mainboard with Samr21-Xpro Controller (top left),
Multiplexer (bottom right) and H-Bridge (top right)

Idea

In this project we used two Magnetic Tape Machines from an old PDP11 Server and converted them into a reaction game for two players. For that purpose the given Hardware was used partly (Motors, Buttons) and was complemented by additional Parts (LCDs, LED-Stripes, H-Bridges, Multiplexer) to create a cohesive arcade game feeling.
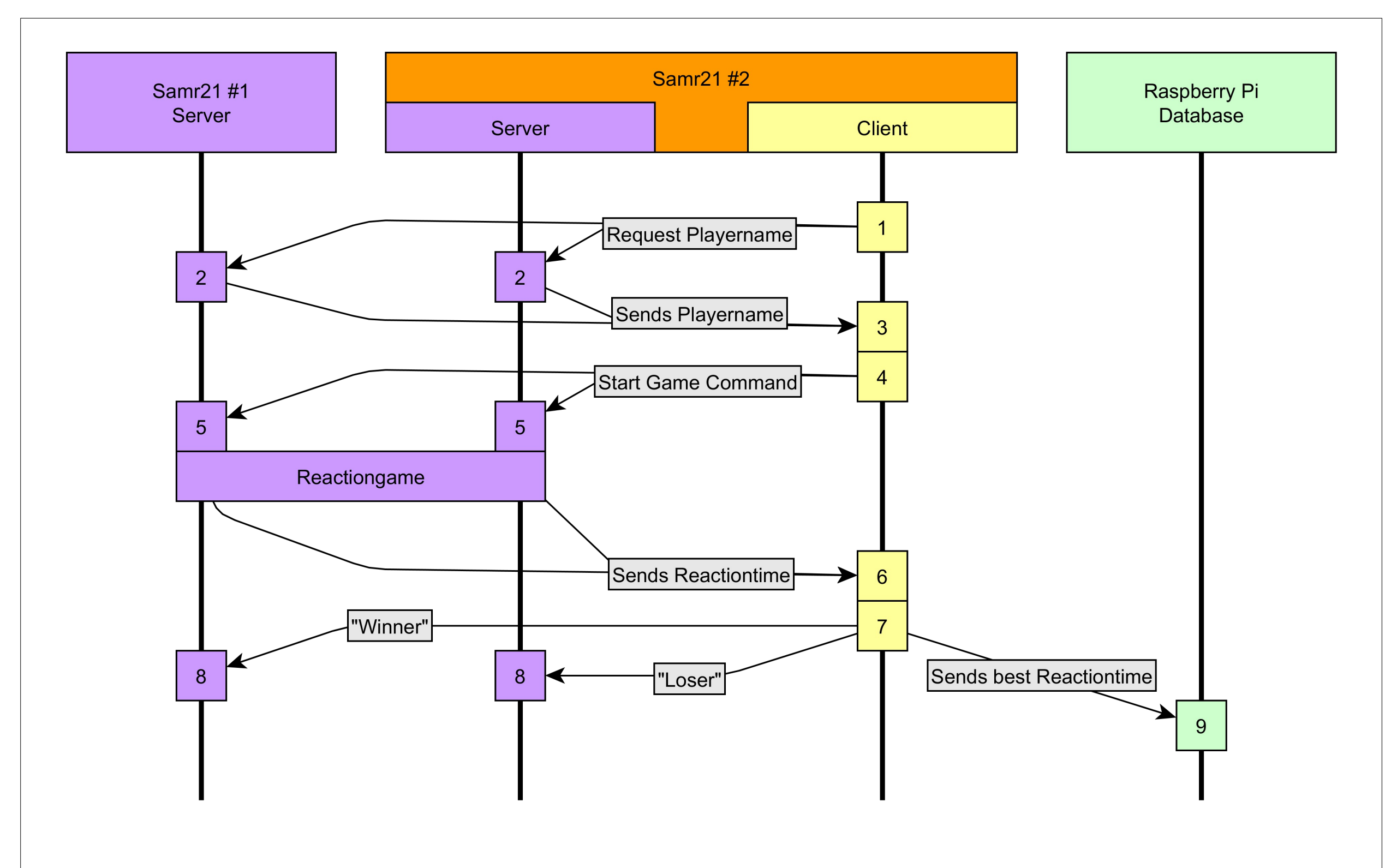

Figure 3: Networking

The Game

In this game you are challenged to react as fast as you can. You need one Player on each Magnetic Tape Machine for Competition.
At first enter your nicknames using the Buttons and fill the line up with Whitespaces if needed.
Once the Machines have finished organizing the game, the Display will show a countdown and the motors will start turning.
Once the motors halt and the LEDs stop changing colors you have to press the glowing button as fast as you can. Only the quicker Player will win and will be added to the highscore.

Now its your turn.