Prototypes Development

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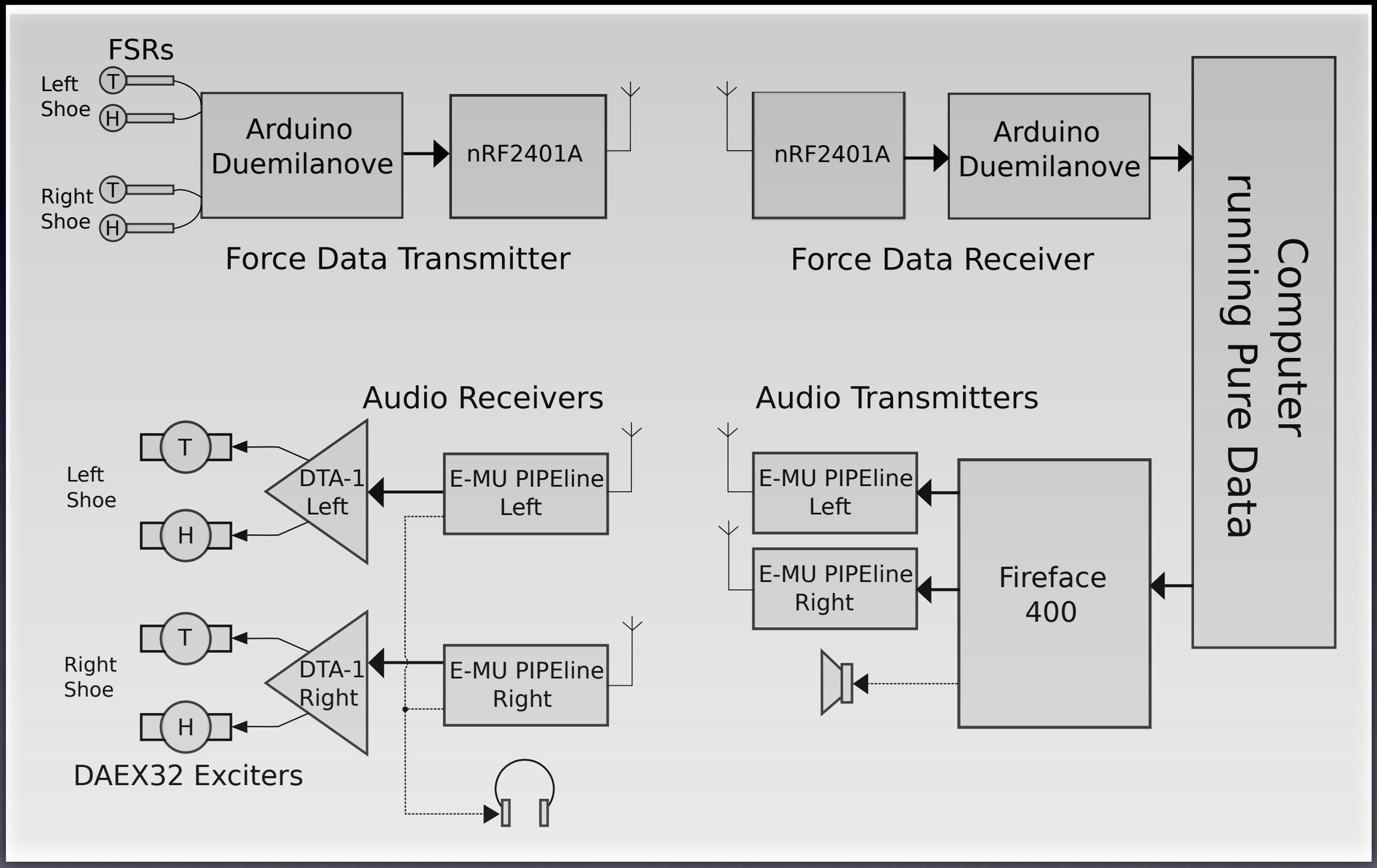
Prototypes Development

- Haptic Shoes:
  - Low-latency, low-cost wireless communication for force data acquisition and audio-haptic feedback;
  - New haptic display system with low-cost commercial exciters under each shoe.

- Sensing Floor:
  - C++ translation and optimization of the Matlab sources;
  - Encapsulation of the code in a Pure Data external using the Flext framework for Real-Time operation (*work in progress*).

Shoes (1)

Block diagram



Shoes (2)

- Four channels wireless data acquisition system. Performances:
  - Sampling frequency up to 1.1kHz per single channel;
  - 10bits resolution per channel;
  - 1ms transmission latency.
- Four channels wireless audio-haptic feedback. Performances:
  - 5ms latency, 48kHz, 24bit resolution per channel;
  - 15W audio output power per single channel.

Shoes (3)

Haptic transducers and removable hoofs.

Shoes (4)

Shoes (5)

Transmitter and receiver modules.