Zurhampton

Evaluation

100 points to be distributed among teams according to ranking in each category:

- Execution speed: 30
- Intermittent execution speed: 50
- Accuracy over the number of tests: 20

Our approach:

- Accuracy is desirable, but not necessary.
- Speed is important, energy is not (increase clock to 16MHz)
- Minimize ANN complexity for speed (N_{layers}=2, $N_{hneurons}$=3)
- Move all data to FRAM, avoid reinitialization (linker file)

Zurhampton

```
    INFOB                   : origin = 0x1900, length = 0x80
    INFOA                   : origin = 0x1980, length = 0x80
/*  RAM                     : origin = 0x1C00, length = 0x1000
    FRAM                    : origin = 0x4000, length = 0xBF80 */
    RAM                     : origin = 0x4000, length = 0x1000
    FRAM                    : origin = 0x5000, length = 0xAF80
    FRAM2                   : origin = 0x10000,length = 0x34000
```

```
    .bss : type = NOINIT{} > RAM                /* Global & static vars              */
    .data : type = NOINIT{}  > RAM                /* Global & static vars              */
    .TI.noinit  : {} > RAM                  /* For #pragma noinit                */
    .stack      : {} > RAM (HIGH)           /* Software system stack             */
```

Performance:

ANN initialisation:
-> execution cycles = 34374
-> execution time = 2.148 ms

Run 429 tests:
-> execution cycles = 21056019 (49081 per test)
-> execution time = 1316.001 ms (3.068 ms per test)

MSE error on 429 test data: 0.034366

Feedback

The Good:

- Great speakers, relevant to transient community
- Cool hackathon, interesting coding exercise

The Bad:

- Getting kicked out of the building at 19h30

The Ugly:

- Crazy Polish names