Meeting 28-7-22

Kyle Christie
Paul Keir

14:00 to 14:58

Notes (as written on paper)

- Quite a rare subject
- Parallel programming
- Chandler Carruthers
    - LLVM
    - C++ Commitee
- Carbon
    - Doesn't have mem safety
    - Building on LLVM
    - Lean C++
- C++
    - Optimisation, undefined behaviours
- Rust
    - Dev idea works
    - Answers scientific question

Take an existing driver & improve

- Research rust and drivers

- Research by MS on Rust, taking it farther

- Tools are much more younger

  - Build on core ideas of rust

- C & Rust & Analysis

  - Good idea!!!

(#) of memory-related issues
- Proper mem mgmt

GPU used for normal calculations, GPGU

opencl
cuda |
| |
| |
V V
Write similar to C/C++ but not the same, a subset

Software Fuzzing
Fuzzing

- Reliably expose weakness
- Randomly mutate code
- Make syntax errors

- Simple brute-force method

Money & appetite
Very employable project

CodePlay bought over by intel

Which type of driver?

User-level driver?
- Client-level bluetooth reader
- Cliet-level interface
- C API's

<u>Ideas</u>
Arduino (read from Serial port?)
USB stick (pass through to VM)
(old computer hardware
that is useless)
Raspberry Pi (SSH)
Trade-off between VM & Pi

Mouse, keyboard, USB
Whatevers most fun

Quite likely to go ahead

Starting early isn't an advantage

```
Potential mods
| - Stephen
| - Joanna
|
V
not much input from mods
```