OMPT working group

Agenda

- Upstreaming OMPT
- What do we want in OpenMP 5.1?
  - Interoperability for OMPT device tracing between OpenMP and CUDA code

Interoperability

- Adding a new target interface complementing the native and tracing interface:

- Basically a marker interface to mark regions of target execution

- Add new callbacks: set and reset correlation context (target_id + op_id) → JMC will create a OpenMP ticket for this interface

```
Target-begin(tid)
        omp-cupti-event-x(tid,op1)
        omp-cupti-event-y(tid,op2)
        omp-cupti-event-z(tid,op3)
Target-end(tid)
```

```
Cupti-event-a(?)

Target-begin(tid)
            cupti-event-x(tid,op1)
            cupti-event-y(tid,op2)
            cupti-event-z(tid,op3)
Target-end(tid)
```

Async Offloading

- Omp target depend(in:a)

Task create + dependences

Task switch
Target-begin(tid)
       cupti-event-x(tid)
       cupti-event-y(tid)
       cupti-event-z(tid)
Target-end(tid)
Task switch

Debugging

- John D submitted several tickets to fix language
  - They passed first vote

- Is OMPD sufficient for other devices like AMD devices?
  - Specifically the address space model
  - Example code JMC received had no relocation in the binary
  - Relocation information is necessary to correlate code in execution to source

- Someone (JMC) will ping AMD to attend the OpenMP LC F2F if they want to have something fixed in OMPD for 5.1