oneAPI Technical Advisory Board Meeting:

SYCL / oneAPI 1.0 Spec Feedback

10-28-2020

Status

- oneAPI open specifications hit v.1.0 on Sept 28, 2020
  - https://spec.oneapi.com/versions/latest/index.html
- DPC++ extensions successfully feeding into/influencing core SYCL spec
  - TAB feedback on the extensions has been critical
    - Has significantly shifted direction of extensions on multiple occasions
- SYCL 2020 provisional making progress toward a final specification
  - Can’t provide more detail here, but anyone can join Khronos if interested

oneAPI

Request for Feedback on direction + details

1. General SYCL direction or evolution
   - What do you believe is missing that DPC++ extensions should drive?
   - Are there any SYCL directions that you believe should change?

2. DPC++ extensions
   - Are any extensions missing or incomplete from your perspectives?

3. Extensions for Intel hardware

Looking for Input/Help On

1. More formal memory model
   - We're looking for help to define this
2. Generalization of hierarchical parallelism
   - We're looking for directional guidance here
3. Requirements for library-based vs. compiler-based impls of SYCL
   - Looking for input particularly around required diagnostics and required features between these two implementation approaches (can they diverge)?

Rules of the Road

- DO NOT share any confidential information or trade secrets with the group
- DO keep the discussion at a High Level
  - Focus on the specific Agenda topics
  - We are asking for feedback on features for the oneAPI specification (e.g. requirements for functionality and performance)
  - We are NOT asking for feedback on any implementation details
- Please submit any implementation feedback in writing on Github in accordance with the Contribution Guidelines at spec.oneapi.com. This will allow Intel to further upstream your feedback to other standards bodies, including The Khronos Group SYCL* specification.

Notices and Disclaimers

The content of this oneAPI Specification is licensed under the Creative Commons Attribution 4.0 International License . Unless stated otherwise, the sample code examples in this document are released to you under the MIT license.

This specification is a continuation of Intel's decades-long history of working with standards groups and industry/academia initiatives such as The Khronos Group*, to create and define specifications in an open and fair process to achieve interoperability and interchangeability. oneAPI is intended to be an open specification and we encourage you to help us make it better. Your feedback is optional, but to enable Intel to incorporate any feedback you may provide to this specification, and to further upstream your feedback to other standards bodies, including The Khronos Group SYCL* specification, please submit your feedback under the terms and conditions below. Any contribution of your feedback to the oneAPI Specification does not prohibit you from also contributing your feedback directly to The Khronos Group or other standard bodies under their respective submission policies.

By opening an issue, providing feedback, or otherwise contributing to the specification, *you agree that Intel will be free to use, disclose, reproduce, modify, license, or otherwise distribute your feedback in its sole discretion without any obligations or restrictions of any kind, including without limitation, intellectual property rights or licensing obligations.* For complete contribution policies and guidelines, see Contribution Guidelines on www.spec.oneapi.com.