



April 11, 2016

BY FEDERAL EXPRESS & EMAIL

Managing Director of Khronos  
Khronos Group  
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Beaverton, OR  
97008-6018

RE: Disclosure Certificate for SYCL 2.2 Provisional Specification

Dear Sir or Madam:

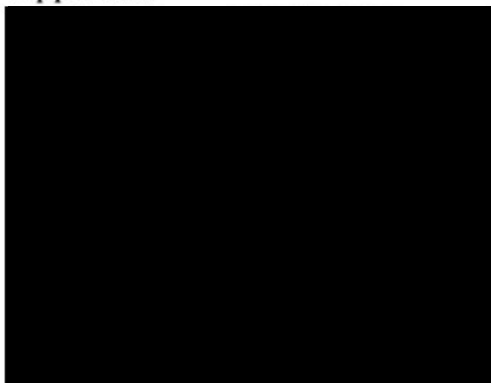
Apple submits this disclosure certificate in response to the email dated March 1, 2016, starting a Ratification Review Period for the SYCL Provisional Specification, version 2.2.

Apple's disclosure certificate identifies in Exhibit A those patent assets that Apple believes may contain one or more claims that if issued would likely be Necessary Patent to the SYCL Provisional Specification, version 2.2.

To the extent any patents or patent applications set forth in Exhibit A or owned by Apple now or in the future, or any parents thereof, or amendments, continuations, divisionals, continuations-in-part, re-issues or foreign counterparts thereof, contain Necessary Patent Claims, Apple does not agree to make available a Reciprocal License to such Necessary Patent Claims for the SYCL 2.2 Specification or any other future versions or extensions thereof.

Any questions regarding this communication should be directed to:

BJ Watrous  
Vice President and Chief IP Counsel  
Apple Inc.





### EXHIBIT A

<b>U.S. Patent, App., Or Pub #</b>	<b>Technology</b>	<b>Applicable SYCL 2.2 Sections</b>
US6976249	Method For Embedding Object Codes In Source Codes	Sections 2 through 9
US7694289	Method For Embedding Object Codes In Source Codes	Sections 2 through 9
US8276164	Data Parallel Computing On Multiple Processors	Sections 2 through 9
US8286196	Parallel Runtime Execution On Multiple Processors	Sections 2 through 9
US8115773	Serializing Command Streams For Graphics Processors	Sections 2 through 9
US8286198	Application Programming Interfaces For Data Parallel Computing On Multiple Processors	Sections 2 through 9
US8350864	Serializing Command Streams For Graphics Processors	Sections 2 through 9
US9052948	Parallel Runtime Execution On Multiple Processors	Sections 2 through 9
US9207971	Data Parallel Computing On Multiple Processors	Sections 2 through 9
US20150022538	Enqueuing Kernels From Kernels On GPU/CPU	Sections 2 through 9
US9250697	Application Programming Interfaces For Data Parallel Computing On Multiple Processors	Sections 2 through 9
US20140201755	Data Parallel Computing On Multiple Processors	Sections 2 through 9
US9250956	Application Interface On Multiple Processors	Sections 2 through 9
US20140201746	Parallel Runtime Execution On Multiple Processors	Sections 2 through 9



## EXHIBIT A

<b>U.S. Patent, App., Or Pub #</b>	<b>Technology</b>	<b>Applicable Sections -OpenCL C++ Specification, version 1.0</b>
US6182107	Management Of Reference Object Lifetimes In Object Oriented Programs	OpenCL C++ Specification: Sections 2 and 3
US6976249	Method For Embedding Object Codes In Source Codes	OpenCL C++ Specification: Sections 2 and 3
US7694289	Method For Embedding Object Codes In Source Codes	OpenCL C++ Specification: Sections 2 and 3
US8370822	Compiling Techniques For Providing Limited Accuracy And Enhanced Performance Granularity	OpenCL C++ Specification: Sections 2 and 4
US9292340	Application Interface On Multiple Processors	OpenCL C++ Specification: Sections 2 and 3
US20150022538	Enqueuing Kernels From Kernels On GPU/CPU	OpenCL C++ Specification: Sections 2 and 3
US20140201746	Parallel Runtime Execution On Multiple Processors	OpenCL C++ Specification: Sections 2 and 3
US20140306975	Multi-platform Image Processing Framework	OpenCL C++ Specification: Sections 2 and 3
US20150347107	Unified Intermediate Representation	OpenCL C++ Specification: Sections 2 and 3
15/008,337 (unpublished continuation of US9292340)	This application relates generally to parallel computing	OpenCL C++ Specification: Sections 2 and 3
14/977,204 (unpublished continuation of US9250697)	This application relates generally to parallel computing	OpenCL C++ Specification: Sections 2 and 3