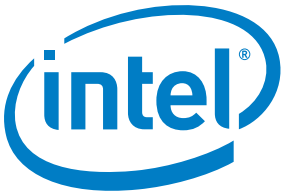

Intel® heteroStreams Porting Guide: Intel® MPSS 3.5 to 3.6

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US

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1 Purpose and Scope

The purpose of this document is to assist users who created code based on the Intel® MPSS 3.5 version of hStreams, and want to port it to the Intel® MPSS 3.6 version of hStreams. Users who are starting the use of hStreams afresh with Intel® MPSS 3.6 can safely ignore this document.

Please see related documentation:

- hStreams_Reference.pdf – heteroStreams Programming Guide and API Reference
- hStreams_Overview.pdf – basic overview of the product and its purposes
- hStreams_Tutorial.pdf – overview of APIs, how to write apps, reference codes
- hStreams_Release_Notes.pdf – release note for heteroStreams package

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2 Changes in Intel® MPSS 3.6

2.1 Added Macros and Constants

- Since now all headers file inside hStreams are no longer including COI (only internal headers) therefore we've added new macros HSTR_CPU_* that are replacing all COI_CPU_* (one to one).
- Related to sink-side function signature maximum name and arguments:
  - HSTR_MAX_FUNC_NAME_SIZE
  - HSTR_MISC_DATA_SIZE
  - HSTR_ARGS_SUPPORTED
- Related to changed versioning name:
  - HSTR_VERSION_MAJOR
  - HSTR_VERSION_MINOR
  - HSTR_VERSION_MICRO

2.2 Changed Structures

- HSTR_RESULT enum type:
  - Added new value HSTR_RESULT_RESOURCE_EXHAUSTED
  - Added new value HSTR_RESULT_NOT_IMPLEMENTED
- HSTR_OPTIONS:
  - Additional entries for using host as target added: *libNameCntHost, libNamesHost*

2.3 Added Structures and Types

- Related to extended buffer properties:
  - HSTR_BUFFER_PROPS
  - HSTR_BUFFER_PROPS_FLAGS
  - HSTR_MEM_ALLOC_POLICY

2.4 Removed Classes Available Outside hStreams

- ConvertToUint64_t – now available in ref_code/common/type_converter.h

2.5 Renamed APIs

No API was renamed.

2.6 APIs Changed

- Related to unification of app API through signature change. All functions related to running on specified logical stream has following conventions: stream_id, params, return value (if function contains it), event:
  - hStreams_app_xfer_memory
  - hStreams_app_xfer_memory

  - hStreams_app_invoke
  - hStreams_app_memset
  - hStreams_app_memcpy
  - hStreams_app_sgemm
  - hStreams_app_dgemm
  - hStreams_app_cgemm
  - hStreams_app_zgemm
- Related to changed type of physical domain id (from uint32_t to HSTR_PHYS_DOM)
  - hStreams_GetPhysDomainDetails
  - hStreams_GetAvailable
- Related to return value size on signature of sink-side which is uint16_t:
  - hStreams_EnqueueCompute
- Related to changed error information handled inside hStreams library from COI_RESULT to HSTR_RESULT
  - hStreams_GetLastError
- Related to change in the behavior of hStreams_Version():
  - Version string returned by hStreams_Version() is now in MAJOR.MINOR[.MICRO] format
- Related to cross-platform portability
  - hStreams_Version() now accepts a uint32_t argument for buffer length instead of a size_t argument

2.7 Added APIs

- Related to extended buffer properties:
  - hStreams_AddBufferLogDomains
  - hStreams_RmBufferLogDomains
  - hStreams_GetBufferNumLogDomains
  - hStreams_GetBufferLogDomains
  - hStreams_GetBufferProps
  - hStreams_Alloc1DEx
- Related to oversubscription functionality:
  - hStreams_GetOversubscriptionLevel
- Related to hStreams version change:
  - hStreams_GetVersionStringLen
- Related to ability to transfer between cards:
  - hStreams_EnqueueDataXDomain1D

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