

Programming Models for Frontier

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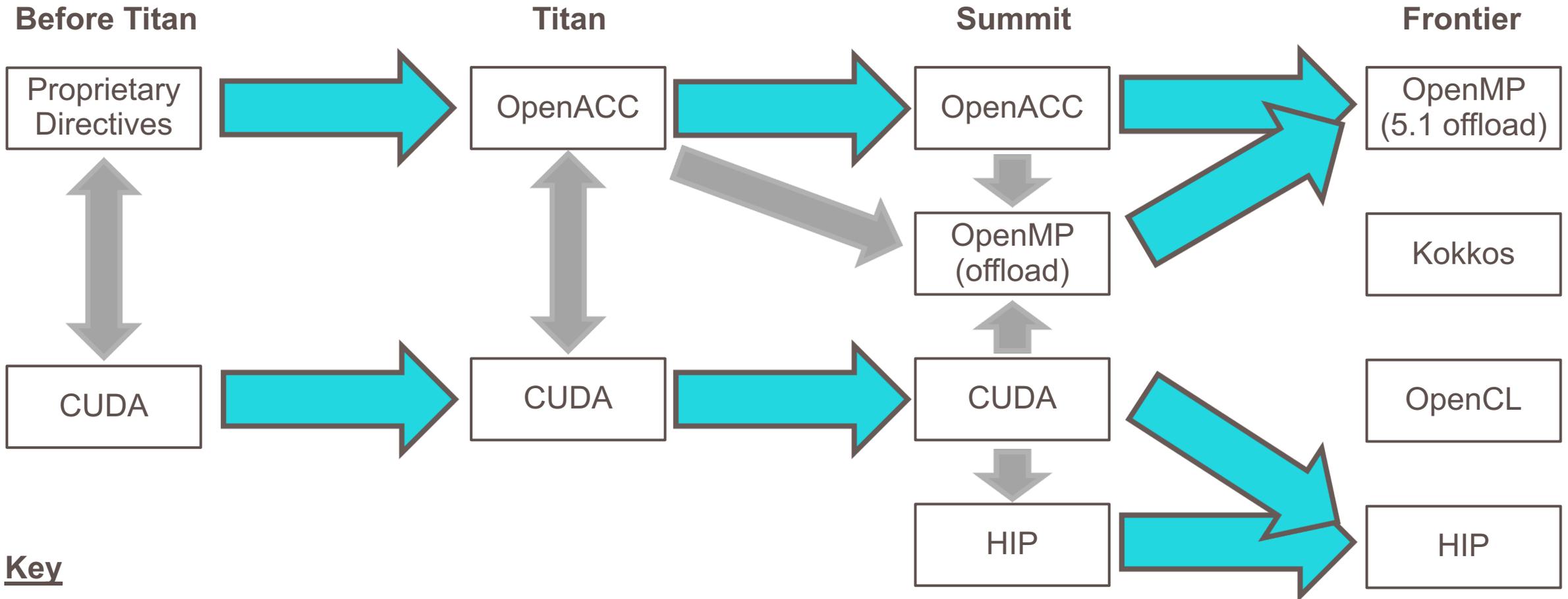
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GPU Programming: Expected Migration



Key

Primary Migration Paths



Secondary Migration Paths



Additional Migration Guidance

- Maintain your problem's working data set in the GPU HBM
 - Best practice: Code design where data use in the host CPU code is rare.
 - Examples of required host use: initialization, occasional filesystem I/O
 - Best practice: Problem size such that data fits exclusively in GPU HBM
- MPI Communication should be through GPU memory pointers
 - This is supported by Cray's MPICH today for NVIDIA GPU
 - This approach also allows best migration to future MPICH capabilities
- More detailed guidance can be shared in the future and through NDA discussions

Programming Model Sessions this week:

Programming Model	Upcoming Talks
HIP	Wednesday Morning “HIP and Kokkos” (AMD) Thursday Lunch: “Proxy Apps - HACC” (AMD)
Kokkos	Wednesday Morning “HIP and Kokkos” (AMD)
OpenMP	Wednesday Morning “Cray Compiler and OpenMP” (Cray) Thursday Lunch: “Proxy Apps – Leslie3D” (Cray)

THANK YOU

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