

Solution Explorer

DCT.cpp DCT\_Kernels.cl

Work Items toolbar should be active when an OpenCL debug session starts

Output

Show output from:



Solution Explorer



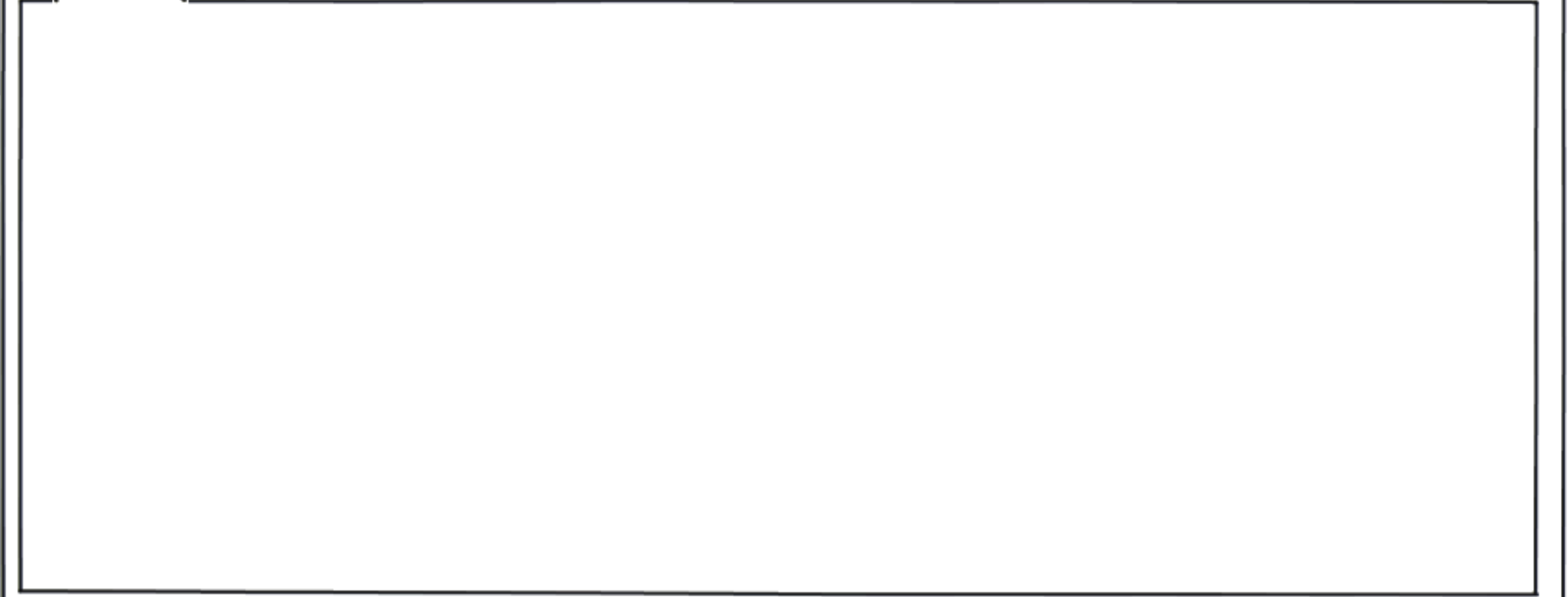
Session 2

Time-based profile

Manage

Separate by none

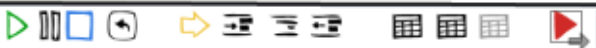
Overview System Data



Output

Show output from:





Solution Explorer

DCT.cpp

Start Debug

✓ Debug Mode

Profile Mode

Frame Step Ctrl+F11

Draw Step Shift+F10

Step Over F10

Step In F11

Step Out Shift+F11

Break Shift+F5

Stop Debugging F6

Breakpoints >

Add / Remove Breakpoints... Alt+Shift+B

Enable all Breakpoints

System Information...

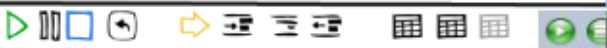
Debug Settings...

CodeXL Options...

Help >

Output

Show output from:



Solution Explorer



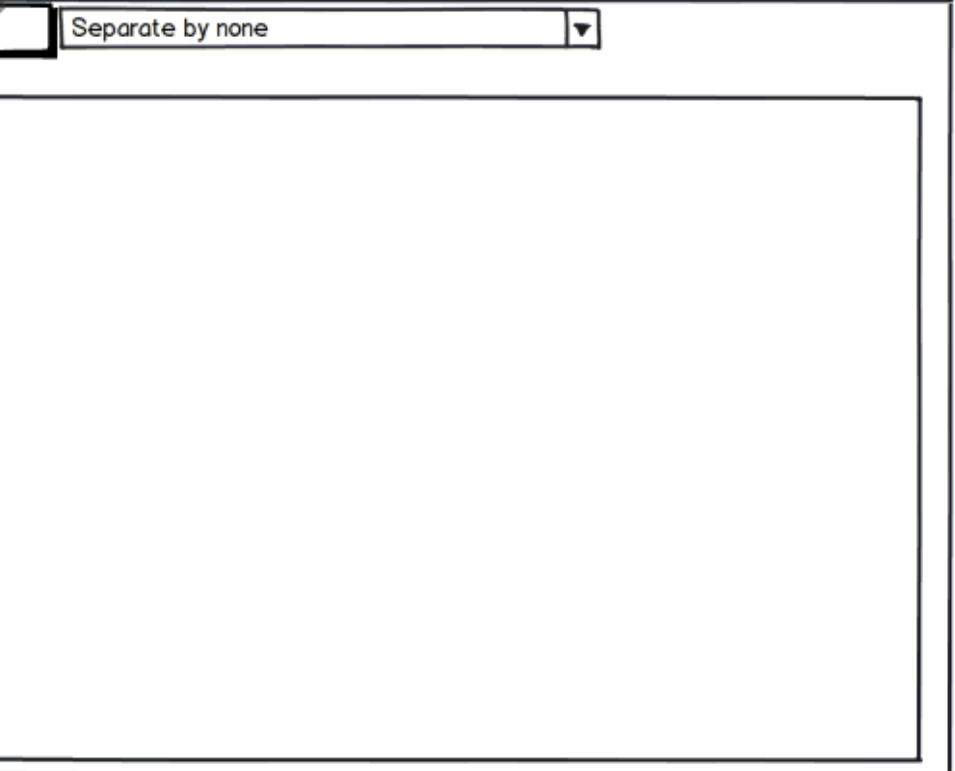
Session 2

Time-based p

Overview

- Start Profile
- Debug Mode
- ✓ Profile Mode - CPU: Time-based sampling
  - CPU: Timer-based sampling
  - GPU: Performance Counters
  - GPU: Application Trace
- System Information...
- Profile Settings...
- CodeXL Options...
- Help >

Separate by none ▼



Output

Show output from: ▼



CodeXL Explorer

- DCT
- CL Context 1 (deleted)
- CL Context 2
- Buffers
  - CL Buffer 1
  - CL Buffer 2
  - CL Buffer 3
- Command Queues
  - Command Queue 1
- OpenCL Programs
  - OpenCL Program 1
    - Kernel 1 - DCT

DCT.cpp DCT\_Kernels.cl

```
/**
 * Enqueue a kernel run call.
 */
cl_event ndrEvt;
status = clEnqueueNDRangeKernel(
    commandQueue,
    kernel,
    2,
    NULL,
    globalThreads,
    localThreads,
    0,
    NULL,
    &ndrEvt);
CHECK_OPENCL_ERROR(status, "clEnqueueNDRangeKernel failed.");

status = clFlush(commandQueue);
CHECK_OPENCL_ERROR(status, "clFlush failed.");

status = sampleCommon->waitForEventAndRelease(&ndrEvt);
CHECK_ERROR(status, SDK_SUCCESS, "WaitForEventAndRelease(ndrEvt) Failed");

// Enqueue readBuffer
```

Work Items toolbar should be active when an OpenCL debug session starts

"Images and Buffers" should appear when an Image/Buffer is opened

Locals

--

Breakpoints

<input checked="" type="checkbox"/> clEnqueueNDRangeKernel
--



CodeXL Explorer

- Timer-based sampling
  - Session 1
  - Renamed Session
  - Session 2
- Instruction-based sampling
  - Session 1
- Events assess performance
  - Session 1
  - Session 2
  - Session 3
- + Events investigate L2 cache access
- + Events investigate branching
- Events investigate data access
  - Session 1
  - Session 2
- + Events investigate instruction access

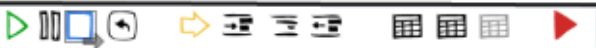
Session 2

Time-based profile ▼ Manage Separate by none ▼

Overview System Data

Locals

CodeXL Properties



CodeXL Explorer

- DCT
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DCT.cpp

```
/**
 * Enqueue
 */
cl_event r
status = cl
    c
    k
    2
    N
    g
    lo
    0
    N
    &
CHECK_C
status = cl
CHECK_C
status = s
CHECK_E
// Enqueue
```

- Start Debug
- ✓ Debug Mode
- Profile Mode
- Continue Shift+Alt+F5
- Step Into
- Step Over
- Break All Ctrl+Alt+Break
- Stop Debugging F6
- Restart Ctrl+Shift+F5
- Step Out Shift+F11
- Toggle Breakpoints F9
- Breakpoints >
- Add / Remove Breakpoints... Alt+Shift+B
- Delete all Breakpoints Ctrl+Shift+F9
- Disable all Breakpoints
- System Information...
- Debug Settings...
- CodeXL Options...
- Views >
- Open Teapot Sample Project
- Help >

```
el failed.");
);
Release(ndrEvt) Failed");
```

Locals

Breakpoints

- ☒ clEnqueueNDRangeKernel

CodeXL Explorer

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```
DCT.cpp
/**
 * Enqueue
 */
cl_event r
status = cl
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2
N
gl
lo
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N
&
CHECK_C
status = cl
CHECK_C
status = s
CHECK_E
// Enqueue
```

Locals

- Break on OpenGL Error Ctrl+E
- Break on OpenCL Error
- Break on Detected Error
- Break on Redundant State Changes
- Break on Deprecated Functions
- Break on Memory Leaks
- Break on OpenGL Debug Output Messages
- OpenGL Debug Output Settings...
- Load Breakpoints...
- Save Breakpoints As...

☒ clEnqueueNDRangeKernel



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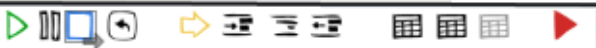
DCT.cpp

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/**  
 * Enqueue  
 */  
cl_event r  
status = cl  
cl  
ke  
2  
N  
gl  
lo  
0  
&  
N  
&  
CHECK_C  
status = cl  
CHECK_C  
status = s  
CHECK_E  
// Enqueue
```

Locals

el failed.");  
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Release(ndrEvt) Failed");

View Help...  
View Tutorial...  
Check for Updates...  
AMD Developer Tools Support Forum  
AMD Developer Tools Knowledge Base  
Open a Support Request  
About CodeXL...



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DCT.cpp

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 * Enqueue
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CHECK_C
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Locals

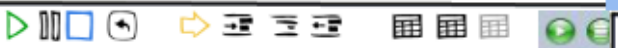
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el failed.");

);

Release(ndrEvt) Failed");

- Debug Explorer Shift+Alt+1
- Function Calls History Shift+Alt+2
- Properties Shift+Alt+3
- Memory Shift+Alt+4
- Statistics
- OpenCL Multi-Watch 1
- OpenCL Multi-Watch 2
- OpenCL Multi-Watch 3



CodeXL Explorer

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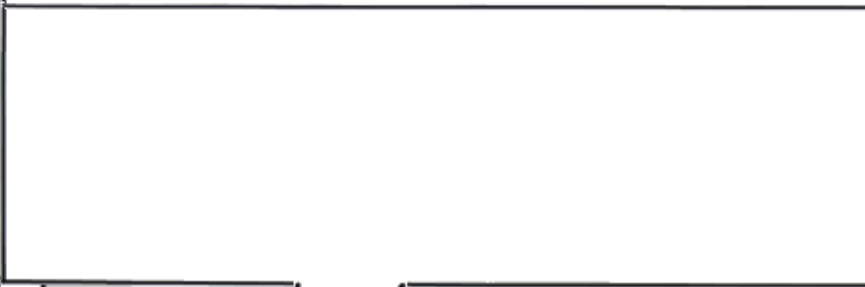
Not sure about the Profile modes' names

Session 2

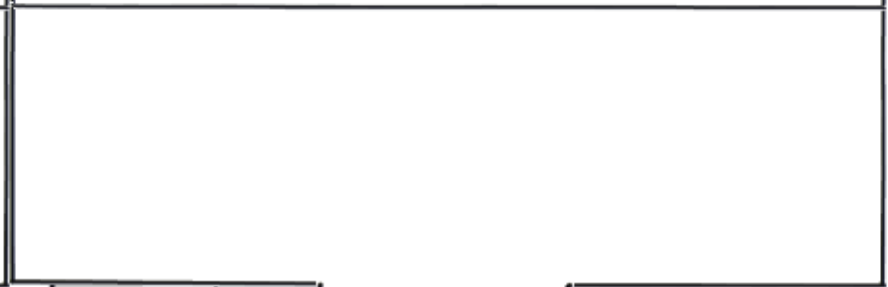
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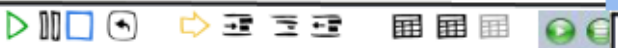
Separate by none ▼

Locals



CodeXL Properties





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Locals

CodeXL Properties