

# GAI Path Searching Toolkit

## Release Notes

### Version 0.1.0 (02/06/2008):

- Reference C++ CPU path, core code not highly optimized

### Version 0.2.0 (03/15/2008):

- First pass for CUDA implementation of A\*/Dijkstra search.
- Use Raven created graphs for regressions, comparing GPU to CPU results.
- CPU path: exploits SSE2 to optimize heuristics.
- Dependencies:
  - o Visual Studio SP1 2005 C runtime libraries (use Visual C++ Redistributable Package).
  - o CUDA 1.1 toolkit and a matching display driver.
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### Version 0.3.0 (06/15/2008):

- Optimizing CUDA search implementation.
- Obtain early performance results in running on GTX280.
- Experiment with large topology graphs (>5K nodes).

### Version 0.4.0 (03/06/2009):

- Initial package.
- Dependencies:
  - o Visual Studio SP1 2008 C runtime libraries (use Visual C++ Redistributable Package).
  - o CUDA 2.1 toolkit and a matching display driver.

### Version 0.6.0 (05/07/2009):

- Dependencies:
  - o Visual Studio SP1 2008 C runtime libraries (use Visual C++ Redistributable Package).
  - o CUDA 2.2 toolkit and a matching display driver.

### Version 0.7.0 (07/27/2009):

- Dependencies:
  - o Visual Studio SP1 2008 C runtime libraries (use Visual C++ Redistributable Package).
  - o CUDA 2.3 toolkit and a matching display driver.

### Version 0.7.5 (09/29/2009):

- On GPU, heuristic hard wired to Euclidian mode for efficiency,
  - o Expect full programmable setting with a CUDA release that supports function pointers.
- Return 'Unsupported Yet' error when attempting to run on OpenCL or DirectCompute platforms.
- Multi GPU unsupported, silently pick up the first compute device in the list.
- Dependencies:
  - o Visual Studio SP1 2008 C runtime libraries (use Visual C++ Redistributable Package).
  - o CUDA 2.3 runtime and a matching display driver.

### **Version 0.8.0 (03/19/2010)**

- Technology Preview version.
- One binary for both Fermi and Tesla (minimum compute capable 1.1).
- User query of waypoints per path for GPU returns zero in this release,
  - o Slow for large graphs with non pinned copy.
  - o Planned for next release using zero-copy.
- User setting of CPU cores maxed transparently by system availability.
- Dependencies:
  - o Visual Studio SP1 2008 C runtime libraries (use Visual C++ Redistributable Package).
  - o CUDA 3.0 toolkit and a matching display driver.

### **Version 0.8.5 (06/08/2010)**

- Using ABI features that makes support only available for compute capable 2.0 (or higher) devices.
- Dependencies:
  - o Visual Studio SP1 2008 C runtime libraries (use Visual C++ Redistributable Package).
  - o CUDA 3.1 toolkit and a matching display driver.