EM Photonics, Inc.

Newark, DE
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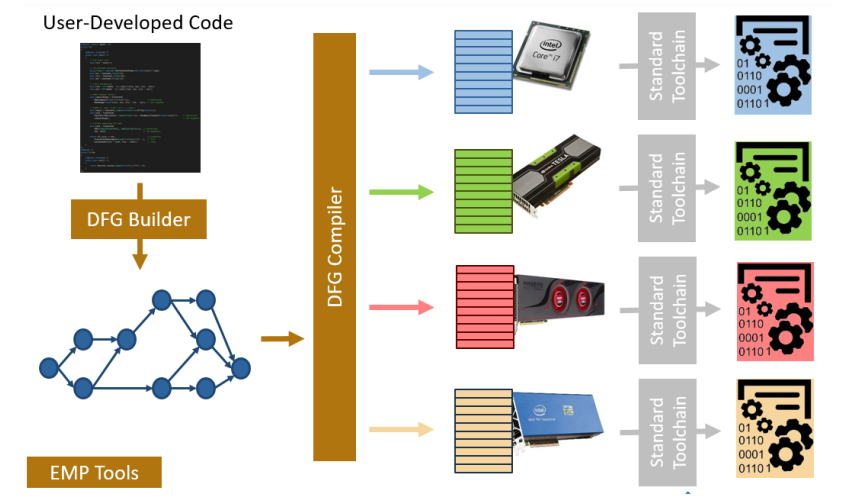
SINCE ITS FOUNDING IN

2001

64 SBIR Awards

8 Employees

SB Socioeconomic Category



Solicitation:
Programming New Computer

DARPA SBIR Sponsor

SB151-004 Topic Number

Rapid deployment of complex image processing

Primary Innovation

Easy code maintenance Secondary Innovation

Functional Dataflow Programming Toolchain for Portable Parallel Code

There is an increased desire to have a unified programming language and architype of ample construct in which software can be written effectively for varying computing platforms and integrated hybrid systems.

EM Photonics, Inc. has developed a toolchain that enables the rapid deployment of complex image processing solutions. The computing architecture will allow developers to write one program that targets multiple platforms, users only need to rewrite the portions they care about and leveraging mature C/C++ compilers, linkers, programming tools, and libraries.

IMPACT

The programing toolchain reduces the burden on programmers of having to learn the details of various hardware architectures; saving the developer both the need to have an intimate understanding of the hardware architecture and to rewrite these sections once new hardware becomes available reducing time and cost.

BEYOND PHASE II

EM Photonics has received two sources of additional funding: the US Air Force Arnold Engineering Development Complex, CRP in the amount of $1,499,382 and from the US Army and Defense Thread Reduction Agency, OTA in the amount of $502,177. EM Photonics is currently using the toolchain to specifically support the US Air Force, DTRA/US Army, and NASA. In addition, it can be used by third parties to develop their own image processing applications.

This research was developed with funding from the Defense Advanced Research Projects Agency (DARPA). The views, opinions and/or findings expressed are those of the author(s) and should not be interpreted as representing the official views or policies of the Department of Defense or the U.S. Government." (Approved for Public Release. Distribution Unlimited 04/09/21)