UDC 004

WOLFRAM RESEARCH – WORK WITH DATA, DEVICES AND LINKING TO SOURCES

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Wolfram is proud to support education and research at top schools worldwide. Wolfram's flagship Mathematica system has been a central tool for education across a variety of STEM disciplines, and now has millions of dedicated users around the world. Over the years, Wolfram has added Wolfram|Alpha, Wolfram Programming Lab and other products, and continues to apply its technology to deliver uniquely powerful solutions for education–across fields and at all educational levels.

With millions of users worldwide, we are a preferred research tool in all Fortune 50 companies. Wolfram Mathematica and Wolfram SystemModeler are used in all areas of engineering, modeling and research. Companies like Shell, Apple, Pfizer, Bloomberg have a proven record of Wolfram Language simplifying and expediting the research process, providing precise results and an opportunity to share their findings with the world.

Wolfram Language, Mathematica and Wolfram SystemModeler offer a complete environment for teaching and research that seamlessly combines a powerful calculation and dynamic visualization engine with an intuitive user interface that makes it easy for anyone to get started. And because our products also include built-in documentation and presentation tools, it's perfect for creating course and project materials. Now there's no need to jump between different programs to get your work done.

Connected devices are central to our long-term strategy of injecting sophisticated computation and knowledge into everything. With the Wolfram Language we now have a way to describe and compute about things in the world. Connected devices are what we need to measure and interface with those things. We have many types of connected devices seamlessly integrated with the Wolfram Language and we are looking to add many more. This work will allow us to have all sorts of important consequences.

For most devices, the functions that comprise the framework are not directly concerned with actual device programming or low-level communication with hardware, which would vary on a case-by-case basis. For instance, one implementation might involve writing low-level programs in C, and then using the WSTP API to expose the C interfaces to package-level Wolfram Language functions. These functions would then be strung together in an appropriate fashion by the framework, creating a Wolfram Language device driver. The workflow to create devices is already developed.