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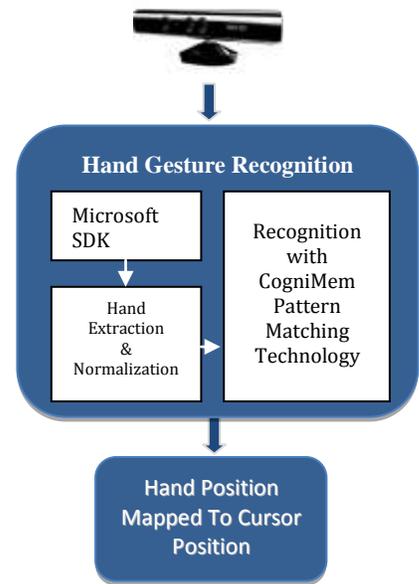
Gesture Recognition using Kinect and CM1K technology at Computer Vision and Pattern Recognition: CVPR-2012

Isaac Asimov, a science fiction novelist, once said “Science can amuse and fascinate us all, but it is engineering that changes the world.” Computer vision and pattern recognition are among the fields of science which have fascinated us all. Thus far engineering advancements in computer vision and image processing have not brought about the changes in society this field has the potential of achieving!

The Computer Vision and Pattern Recognition organization (CVPR) held their 2012 conference in Providence, Rhode Island during the week of June 18.

The purpose of this conference was to provide a forum for engineers to present their discoveries and advancements to the computer vision and pattern recognition community.

Bill Nagel and Chris McCormick represented CogniMem at the conference where they displayed the integration of the [CM1K](#) with the [Microsoft Kinect camera and its SDK](#) to achieve a reliable, real-time gesture recognition system that added the ability to recognize and process hand and finger gesture recognition to the current Kinect platform. The Kinect camera provided the skeleton and depth field information; the CM1K technology was used to



Block Diagram for doing gesture recognition and controlling cursor using CM1K and Microsoft Kinect

enhance the system to recognize hand gestures.

The demonstration served a dual purpose, first was to prove how CogniMem’s technology can be used for gesture recognition even if the input is noisy or not 100% accurate, second, to show the ease of integration of CogniMem’s technology with contemporary technologies.

CogniMem’s demonstration was ranked first on the feedback from the viewers. To watch the demo video [click here](#).

Furthermore, [Embedded Vision Alliance](#) (EVA) is featuring a video



"...MATLAB framework favors a numerical computing environment and facilitates plotting of functions and data"

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*"...Also, you can create a profile and post your questions or can reply to a post.
...."*



demonstrating how the addition of CogniMem's scalable and general-purpose pattern recognition can be used to enhance gesture control. This enhancement can be used in translating American Sign Language (ASL) to text or expanding the game-playing experience. To learn more [click here](#).

MATLAB SDK- Beta version

CogniMem has a software development kit (SDK) in MATLAB for matrix manipulations and algorithm development for CogniMem's products in beta development. This beta version will enable users with symbolic computing capabilities. It will be available late Q3.

MATLAB framework favors a numerical computing environment and facilitates plotting of functions and data.

A graphical representation gives a better interpretation of any process and can be instrumental in model-based design for dynamic and embedded systems. For further information on MATLAB SDK, please write us at info@cognimem.com

Get Social with CogniMem

Get the latest updates on technology, products and upcoming events on the fly! Get connected with CogniMem through social media.

You can subscribe to "CogniMem Technologies Inc." channel on [YouTube](#). This channel has several informational and interesting videos.

Are you aware of CogniMem's [FAQ page](#)? Here you can find answers to frequently asked questions. If you cannot find an answer on the FAQ page then check out [Forum page](#). Here you can browse various topics

for answers to your questions. Also, you can create a profile and post your questions or can reply to a post. This is a great way to engage oneself with the technology.

If you are new to this technology, then try out Educast through EETimes. This is a comprehensive educational video on CogniMem Technology, which explains the technology and its possible applications in a simple to understand language. Hundreds of viewers have taken advantage of this tool, you should too! To view the Educast presentation [click here](#).

CogniMem believes in knowledge sharing, and the greatest way to share is through social media. Start your knowledge flow today by getting connected with CogniMem. Click on the following icon for quick access to the gaze tracking demo. This demo uses a [V1KU](#) and 4 infrared LEDs to track the gaze of eyes, i.e. where your eyes are looking on the screen.



Gaze tracking using V1KU

To get quick access to EETimes' Educast click on the following icon.



Should you have further questions or queries, feel free to write us at info@cognimem.com

CogniStix: neurons in your pocket.



“.. Thanks to CogniMem, it is now possible to carry neurons in our pocket..”

CogniMem soon will offer a product that will provide exceptional convenience and flexible use of neurons with your application. CogniMem designs each product with a mission to make neurons easier to use and more flexible.

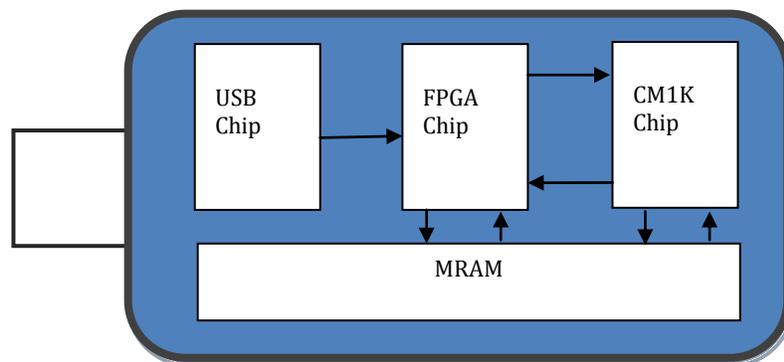
CogniMem's latest CogniStix (CTX) with its USB connectivity and small form-factor resembles a thumb drive. The potential benefits of this product are measured in several ways; first it is compact and easy to carry, second it does not require any external cable for connectivity, and third the quality makes it a great value product. CTX will be available with its SDK late Q3 of this year.

The block diagram displays the major components of this product. CTX will have a USB chip, an

FPGA chip, a CM1K chip and an MRAM chip. The USB chip will provide the connectivity with the USB host. The FPGA will provide the ability to configure CTX and to customize connectivity for an application. The CM1K chip, a massively parallel pattern recognition engine, will provide 1024 neurons for an application. The MRAM will be used for faster read and write. As MRAM is a non-volatile memory, it will enable CTX to retain its information even in a powered off state.

With CTX, carrying a powerful recognition engine will be very convenient and easy.

Thanks to CogniMem, it will be possible to carry neurons in our pocket. For further information or queries please write to us at info@cognimem.com



Block Diagram showing CogniStix components

International Event

AppleTec Ltd. one of CogniMem's distributors is organizing a seminar in Herzliya, Israel on July 24th 2012. In this seminar application specialists from the USA will visit Israel to demonstrate and explain the potential of a hardware based, machine learning pattern recognition engine. They will also go over the basics of neural networks and why it is an excellent solution for Von Neumann model bottleneck problems. This seminar will be a great opportunity to learn about the technology and potential applications.

For further information visit cognimem.com or write us at info@cognimem.com

