



## **Vello Systems Shatters Walls Between Optical, Ethernet and Virtual Networking Domains with Protocol-Independent VellOS® Software**

– Application-Aware, Deployed Software-Defined Environment Capabilities  
Highlight VellOS Rollouts from Hudson Fiber Network/NYSE and Rensselaer Polytechnic Institute; Partner Lineup Starts with EMC, Accton and Centec\*

**Menlo Park, CA –June 6, 2013** – Vello Systems, a leading provider of open, converged networking and software solutions and charter member of the Open Networking Foundation, today announced VellOS® 7.0, the first scalable enterprise network OS that redefines how companies can build and manage highly adaptable, reliable and cost-effective IT infrastructure using any mix of networking technologies. VellOS liberates large-enterprise CIOs and their data center teams from the current constraints of expensive, single-vendor-templated conventional networking architectures. These now-ubiquitous architectures have had the unintended consequence of suppressing competitive enterprise market advantage for the better part of a decade.

VellOS turns the model on its head by dramatically simplifying the operational management of compute and storage connectivity across a rich mix of networking technologies – Ethernet, optical and/or hybrid -- from a single, open, vendor-agnostic point of control that can readily adapt to fast-changing business and end-user requirements. Vello allows customers to “rediscover” technology-driven competitive advantages by decoupling the application/compute, storage and networking domains, thus removing the network as an innovation limiter for successful IT application deployments and initiatives.

Leading institutions such as Hudson Fiber Network -- connecting to the new NYSE -- and the Computational Center for Nanotechnology Innovations at the Rensselaer Polytechnic Institute are among the first to deploy VellOS to improve enterprise computing performance. Industry partners, such as EMC (for storage-related applications), Accton, and Centec, and fast-growing Big Data application companies are also embracing the VellOS solution architecture. As a result, Vello’s Open Network Platform, with VellOS at its core, is a complete, fully-integrated OpenFlow-enabled network stack designed as an open ecosystem, including the VX Family of Ethernet Forwarding Engines, Vello VX1048 and Vello VX3048, and Vello CX optical network systems.

As a contributing member of the ONF, Vello is a proponent of creating a fully open IT infrastructure. It created VellOS to specifically address control of the up-till-now missing piece of this industry movement – the underlying network itself – to ensure that



customers had a full palette of technology choices available to them – and at compelling price points.

Unlike current SDN virtual overlay solutions that have no awareness of the underlying network, VelloOS unifies the control of the optical, Ethernet **and** virtual networking planes under common open software and features a level of automation not found in competing offerings. Based on a distributed Linux framework, VelloOS incorporates standards-based RESTful application provisioning interfaces (APIs) and GUI-style network policy and control to let customers mix and match any combination of OpenFlow-enabled network devices, regardless of technology. They will also allow VelloOS to interwork with a variety of orchestration solutions via simple plug-ins. As a result, only VelloOS offers dependable end-to-end visibility – for management and analytics -- of all network resources (and at all network link speeds).

VelloOS 7.0 OpenFlow-enabled application platform is used by leading edge enterprises worldwide to create distributed modular Ethernet and optical architectures that enable customers to determine which parts of the network to use in support of new applications and service requirements. For example, in a hybrid optical/Ethernet data center under VelloOS control, an application itself could “decide” to send QoS/latency-sensitive long data flows across a lossless optical path, rather than send it over an available Ethernet fabric. VelloOS 7.0 is the company’s first major release to support both Optical and Ethernet devices in a common framework. (Previous versions supported Vello’s large installed base of Metro Optical Switches.)

This type of application-centric approach is a sea change from the current requirement of effectively re-architecting an entire network on an end-to-end basis for each new service. As a result, enterprises achieve increased “application velocity” with VelloOS, meaning they now have the freedom to deploy new applications and technologies at the speed of their business opportunities rather than be held captive by the pace of technology innovation set by one or two equipment vendors.

“Today’s networks have been suffocated by hardware. VelloOS breaks hardware’s grip on network resources, allowing applications to flourish and enabling businesses to achieve their business goals,” said Karl May, Chief Executive Officer, Vello Systems. “We are leveraging our heritage in Optical networking to provide Open Networking control of both the Ethernet and Optical forwarding planes. The VelloOS 7.0 operating system is able to manifest the physical Optical/Ethernet underlay into a pool of ports to provide differentiated network connectivity services based on parameters such as bandwidth, latency, resiliency, cost. This is something that the virtual overlay providers are not able to achieve, as they lack physical network tie-ins and end-to-end visibility.”

“On the other hand, the big networking players are able to see their own physical networking gear, but not that of others. Importantly, since their control function is embedded in closed/proprietary forwarding hardware, the network is still wedded to the



rest of the networking estate -- applications, compute, storage, etc. The result is that technology innovation is held captive to the R&D cycle of these large networking companies," May concluded.

"By helping us deploy a high-performance network with the fastest routes in the financial industry, Vello Systems has already laid the technology groundwork that gives HFN true ongoing competitive advantage," said Brett Diamond, President of Hudson Fiber Network. "We now have the exceptional business flexibility to provide **metered**, lit, grey, or dark-fiber services to our clients. Now, with the release of VelloOS 7.0, our network is SDN-enabled, giving us the ability to onboard new services even more quickly and at much lower component cost and improved latency."

"For emerging technologies to gain widespread adoption, users need to have visibility into real world deployments from their peers. Last month at the Open Networking Summit Vello Systems showcased one of its large SDN customers and is now following that up with several more customer examples and industry partnerships," said Bob Laliberte, senior analyst at the Enterprise Strategy Group. "This growing market traction and industry momentum should help to validate Open Networking and accelerate the adoption of Vello Systems Solutions."

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\*Editors Note: See Centec/Vello press release dated April 11, 2013 and Accton/Vello press release for details.

### **About Vello**

Vello Systems' software defined application platform allows the network to act as a dynamic pool of resources for ever-changing application requirements to speed deployment and increase agility. Vello Systems eliminates the complexity of connecting storage and compute systems to improve overall IT performance, reliability, and cost effectiveness. Vello's open networking solutions, with standard programmatic interfaces, integrate seamlessly into leading IT solutions. The Vello family of products is built around the VelloOS operating environment and OpenFlow enabled hardware from an ecosystem of partners. Vello's solutions have been deployed with blue chip Fortune 500 customers in mission-critical environments. For more information contact [www.vellosystems.com](http://www.vellosystems.com).

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