ASSURANCE CONTINUITY MAINTENANCE REPORT FOR OWL COMPUTING TECHNOLOGIES DUAL DIODE NETWORK INTERFACE CARD VERSION 6

Maintenance Report Number: CCEVS-VR-07-0018a

Date of Activity: 10/16/2007

References: Common Criteria document CCIMB-2004-02-009 "Assurance Continuity: CCRA Requirements", version 1.0, February 2004;

Impact Analysis Report, **"**Impact Analysis Report for Changes in Owl Computing Technologies Dual Diode Version 6, using Version 4 EAL4 Certification as Baseline Reference"

Documentation Updated: Owl Computing Technologies Dual Diode Network Interface Card Version 4 Security Target for EAL-4 Certification

Owl Computing Technologies Dual Diode Network Interface Card Version 4 developer evidence documents

Assurance Continuity Maintenance Report:

The vendor for the Dual Diode Network Interface Card, Owl Computing Technologies, submitted an Impact Analysis Report (IAR) to CCEVS for approval on 25 September 2007. The IAR is intended to satisfy requirements outlined in Common Criteria document CCIMB-2004-02-009, "Assurance Continuity: CCRA Requirements", version 1.0, February 2004. In accordance with those requirements, the IAR describes the changes made to the certified TOE, the evidence updated as a result of the changes and the security impact of the changes.

Changes to TOE:

This maintenance activity consists of multiple changes to the previous evaluated TOE. Most notably is the change from designated transmitters for send and receive to a new single transceiver. It is claimed that separate components for photo-detection and photo-transmission, as used for the Version 4 product, could not be found that were also capable of operating at the desired 2488 Mbps throughput performance level. The potential for dual-direction operation of the transceiver has been achieved by installing the transceiver in a manner enables only the appropriate function (i.e., send or receive); further, transmission in the incorrect direction are additionally blocked by sealing the appropriate interface with an opaque material. The approach of using the opaque material was used and tested in Version 2 of this product, which was evaluated.

Additionally, the product replaced the Version 4 Asychronous Transfer Method (ATM) controller with new ATM controller hardware (designed by OWL) using FPGA technology for ATM Segmentation and Reassembly (SAR) functions. This was done because industry standard components could not achieve the required throughput performance. This component adds

additional security segmentation-only or receive-only functionality that are not considered TOE security functions. The table below is a summary of the major modifications from version 4 to version 6 of the product.

DDNIC Version	Config	Optical Component	Optical Interface	PHY	ATM Controller	Host Interface
6	Send Only	Avago AFCT-5943TLZ Transceiver	LC SM Optical Fiber	PMC SIERRA PM5381-BGI	Owl 2501 ATM Segmentation & PCIe Controller	PCIe v2.0
6	Recv Only	Avago AFCT-5943TLZ Transceiver	LC SM Optical Fiber	PMC SIERRA PM5381-BGI	Owl 2502 ATM Reassembly & PCIe Controller	PCIe v2.0
4	Send Only	Avago HFBR1116T Optical Emitter	ST MM Optical fiber	Mindspeed CX28250-26	Mindspeed CN8236EBG SAR	PCI v2.2
4	Recv Only	Avago HFBR2116T Optical Receiver	ST MM Optical fiber	Mindspeed CX28250-26	Mindspeed CN8236EBG SAR	PCI v2.2

The IAR provided by Owl indicates that the assurance evidence has been updated to reflect this changed, and that appropriate testing of the changed TOE has occurred.

Conclusion:

The Owl Dual Diode NIC version 6 has some substantial changes to the previously evaluated versions of the product. Namely, there is now a transceiver as opposed to separate transmitter and receiver for data flow. This change impacts a component that signifies the core functionality of the product; however, the method of installation combined with the use of physical methods used and evaluated previous mitigates the impact of this change. The ATM SAR component does have additional security features, however, these do not impact the existing SFRs. **Users of this product must clearly understand the additional security features of the ATM SAR component have not been evaluated.** The simplistic nature of this product supports the view that this particular change is a **minor change** and that certificate maintenance is the correct path to continuity of assurance.

It is likely that future maintenance actions will require that all advertised security features in the overall product be evaluated.