# Embedded Electrical and Computer Engineering
# MASTER ORAL DEFENSE

TITLE: *Implementing uClinux on tPad DE2-115 Board*

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TIME & DATE: **10:00am, April 4th, 2013**                    LOCATION: **SCI 110**

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## ABSTRACT

µClinux is a port of the Linux operating system targeting embedded system platforms that lack memory management units(MMU). The lack of an MMU imposes additional requirements. The tPad De2-115 board is an embedded system development board that allows hardware and software integration for developing an embedded system. It supports the Nios II soft core processor. Current Nios II set of patches do not provide support for shared libraries. Thus all libraries must be statically linked in to the final binary, making compiled binary size, especially for embedded systems, a critical concern. Several open source projects centered on uClinux exist, and are tailored to the specific requirements of embedded development. uClinux was originally a set of patches to the existing Linux kernel. It has since been incorporated into the main Linux kernel.

The driver that needs to be developed and integrated to the Uclinux is the driver for LEDs. To include this driver it is necessary to port the batch point to the intended data read of these driver.

To test the proper working of uClinux, a C application will be developed on the system.