**DEPARTMENT OF ELECTRONIC &
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PAPER TITLE: Mobile Energy Harvesting

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ABSTRACT:

Mobile consumer electronics have become a significant part of modern life. However, with current environmental issues and the growing demands on battery-life, such as wireless connectivity and media playing, the issue of energy consumption is of increasing concern. With a display in mobile unit consuming half of the available energy, increasing the efficiency of the display would be an attractive enhancement.

We propose to incorporate photovoltaic cells into OLED display units to harvest uncoupled light around the periphery of the screen. The report identifies the necessary requirements of a charging circuit for feeding back the energy harvested in such a system. We consider mobile energy storage, DC to DC charging circuits and Thin Film technology in designing and implementing a proof-of-concept circuit.