WearCAM Personal Imaging

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In Association With KODAK

MEng Final Year Project
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http://www.isoft.demon.co.uk/wearCAM/
1.0 What Is WearCAM?

WearCAM is a wearable imaging project, this offers:

- The ability to capture, store, sort and share pictures
- A Wearable system

1.1 Pioneering Ideas - Startle Cam

The system shown here offers wearable camera with an additional option: images are saved by the system when it detects certain events of supposed interest to the wearer. The implementation described here aims to capture events that are likely to get the user's attention and to be remembered.

- The main disadvantage to this system is that the wearable part of system is very large expensive and clumsy.
1.2 Other Wearable Computer Systems

TekGear Via II Wearable computer COST - $5000!

1.2 Solution - PC/104

The proposed solution is to base the system on a PC/104 module. Designed for embedded use.

- Small 90mm x 99mm
- 100% PC Compatible – Runs any PC software
- Low Power
- Very Rugged and Reliable (embedded)
- Very Powerful - P233 64Mb RAM
- Low Cost - economies of scale
1.3 Engineering Challenges

Power Consumption:
- Power consumption to less than 5W small batteries
- Switch of display and peripherals etc
- Efficient DC-DC converters from batteries to components

Distribution of the system:
- External camera
- External screen
- External storage
- Distributed power cells
- System Network

Small Construction:
- Very small space gives problems with heat and interference

EMC (Electro-Magnetic-Compatibilty)
- Susceptibility
- Emissions
2.0 What Is The Connection with WearCAM and the HandLeR Project?

Projects based on HandLeR in the past have often centred around software applications running on PC based systems such as small laptops, and ideas have been conceived for other platforms such as Windows CE.

Until now, these have been essentially off-the-shelf solutions, and the very idea of HandLeR requires a system that is very portable, and that is not cumbersome. The proposed solution for WearCAM is a small wearable computer based on the PC/104 specification, which is 100% PC compatible, which allows it to run standard software, to this end, it will provide a high performance platform on which HandLeR based software will be able to run thus fulfilling more than one goal at once.

- To Provide a Wearable Imaging Device.
- To Provide a high performance platform that is very small and PC compatible.
- Try http://www.eee.bham.ac.uk/handler/ for more details

3.0 Questions?

Visit WearCAM @

http://www.isoft.demon.co.uk/wearcam/

END