SavitribaiPhuleShikshanPrasarakMandal's
SKN SINHGAD COLLEGE OF ENGINEERING
A/P: Korti Tal: Pandharpur Dist: Solapur

One Page Seminar Report
Held Under IETE ISF

Seminar Topic: "Carrier Guidance in Embedded System"

Expert Name: Mr.VaibhavThorat

Company Name: Bioanalytical Technology Pvt,Ltd. Pune.

Date: 18/08/2018

Descriptions:

Based on our experience in dealing with numerous number of students, we felt that there is a less amount of awareness existing about Embedded Systems.

An embedded system is a special-purpose system which performs a specific task with its own hardware. The embedded system is different from a general purpose computing devices (Like PC) because of its size, functionality and resources. Since the system is dedicated to specific tasks, design engineers can optimize it by reducing the size and cost of the product to a larger extent which requires good designing skills. Embedded systems are often mass-produced; in order to have cost savings multiplied by millions of items.

Physically, embedded systems range from portable consumer devices (such as MP3 players, PDA's, Mobile phones, gaming devices) to large Enterprise products (such as Enterprise routers, Networking switches and Industrial automation systems). From an engineering point of view embedded systems development is very different from an application development.

Even though embedded systems vary in various functionalities, the programming fundamentals remain almost the same. The challenges in embedded systems programming is because of the following reasons. Embedded systems have very limited resources (in terms of memory, storage, processing power) compared to a general purpose computing device like PC.

Because of the less memory availability and requirement of faster response, embedded systems have Real Time Operating Systems (RTOS). These RTOS have flat memory model where all processes in the system run under the same memory space. This will lead to lot of memory corruption and inter process communication errors. Debugging these errors are really challenging.

Embedded systems have a pre-defined performance requirements and response time.

Since the embedded software will be running in a dedicated hardware, troubleshooting them requires strong system level understanding and debugging skills.

To start with, Micro controller based boards are good ones to learn the board level programming. After that one need to get hands on experience in boards like: PIC, Mechatronic and ARM board. If an engineer get an opportunity to work on customized boards, which are used in live projects it would be really useful to get a good knowledge.

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The function was concluded with vote of thanks by Ms. Priyanka Kadamand lot of promises and hope for future.