

Case Study : TCS Ltd.

Tata Consultancy Services (TCS) is one of the world's leading information technology companies. Through its Global Network Delivery Model™, Innovation Network, and Solution Accelerators, TCS focuses on helping global organizations address their business challenges effectively.

Amplify has extended its expertise to TCS for training their employees on the following schedule

Technology	Location & Period	Audience	Batch size
Bluetooth Core Specification	Pune, Nyati (March 2007)	Laterals	25
WinCE.net Platform Development	Pune, TMTC (January 2006)	Laterals	35

Bluetooth Training:

Pre-training diagnosis - The audience had the background of basic digital and wireless communications fundamentals. However the audience was totally new to the Bluetooth system functioning and layer operations.

Training Objective - Introduce and discuss in detail, the Bluetooth system functioning and layer operations for Core and Profiles stack pertaining to v2.0 specification.

Conduct of training - The initial part i.e. on Day 1 of the training covered the Bluetooth system fundamentals including various WPAN/WLAN/WMAN standards, Overview of Bluetooth v2.0 core specification stack and each layer functions. Post-lunch discussion was based on Radio and Base-band layer operations.

The Day 2 proceeded with Bluetooth voice and data links establishment techniques for Link Manager layer, L2CAP and RFCOMM channels and functions, SDP Client and Server roles.

Finally Day 3 introduced the Bluetooth Profiles and implementation case-study of Virtual Serial Ports over RFCOMM layer to implement several profiles over an ARM-based hardware. Standard Testing and Debugging techniques for Bluetooth radio and protocol stack were also carried out on a practical basis using commercial software.

Several case studies were handled related to the Bluetooth project and protocol stack software implementation below and above HCI on standard development hardware (platform).

Reading materials and assignments given to all candidates for personal reference. Test conducted on the final day evening, resulted in more than 70% performance for all candidates.

Post-training activities - Post-training query handling for reading material over email by the trainer and interaction with the team leader for further training and support.

Windows CE.net Training:

Pre-training diagnosis - The audience had the background of .net Compact Framework, but very less domain knowledge of Embedded platforms and Windows CE Operating System.

Training Objective - Introduce the Windows CE 4.2 Operating System Internals including several aspects of the Virtual Memory Model, Processes and Threads, Files and Shared Memory, Remote API and ActiveSync programming; Also learn Win32 API (native) programming skills, and finally the Platform Builder Tool and its several performance monitoring utilities for kernel tracking and debugging.

Conduct of training - The initial part i.e. on Day 1 of the training covered Windows CE 4.2 OS internals, architecture, embedded side of the application development like performance issues and efficient memory management with enough hands-on on demo and practice assignments on related topics with Win32 API (native) programming.

The Day 2 proceeded with techniques for Communication mechanisms with PC, including RAPI & ActiveSync, further extending with the device driver model, interactions with devices like touch screen, keypad using the underlying drivers, direct interaction with Video RAM.

Finally Day 3 introduced the Platform Builder along with its several concepts of Catalog items, BSP, OAL, BootLoader, Kernel configurations, CEPC/x86/ARM, debugging techniques, creating, customizing and deployment of OS image on actual hardware/development environment i.e. Standard Development Board (SDB).

Several case studies were handled related to the standard development hardware (platform) and custom OS image implementation on the standard development hardware (platform).

Reading materials and assignments given to all candidates for personal reference. Test conducted on the final day evening, resulted in more than 85% performance for all candidates.

Post-training activities - Post-training query handling for reading material over email by the trainer and interaction with the team leaders for further training and support.