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KFUPM Wireless LAN

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Contents

- Introduction
- Technology - Brief overview
- Project Plan
 - RFP and Start dates
 - Progress Curve
- Coverage and utilization statistics
 - Current coverage/utilization
 - Projected coverage/utilization
- Future coverage extension plan
- Ongoing wireless projects
- Challenges

Introduction

- ICT takes pride in announcing the wireless LAN service in KFUPM
- Honourable KFUPM faculty, students, staff and authorized guests can now access the local network resources and Internet wirelessly
- The state-of-art technology with the help of latest and advanced tools is used to deploy the wireless infrastructure

Technology - Brief Overview

○ Specifications:

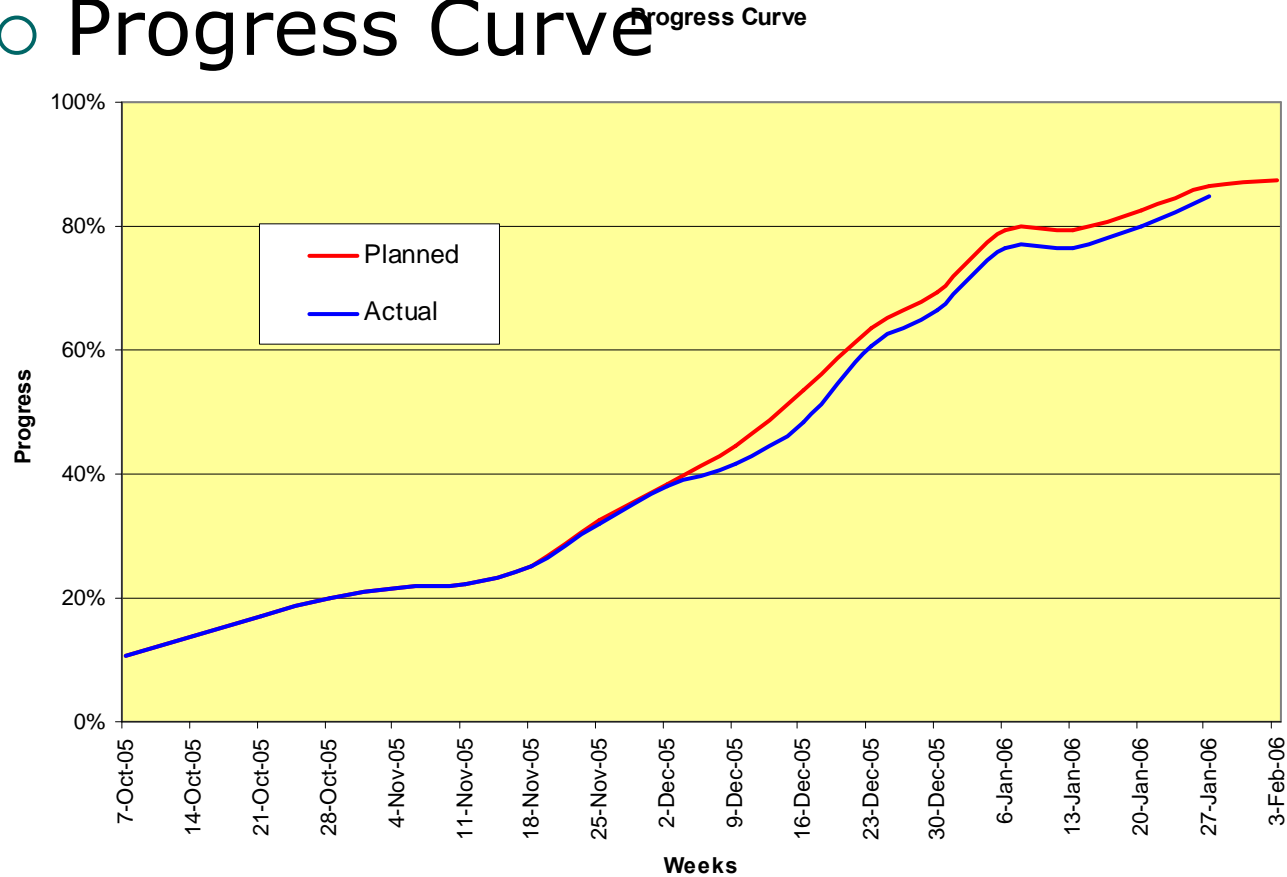
- Complete Cisco wireless LAN deployment with Aironet 1200 AP series
- IEEE-802.11g (Backward compatible with 802.11b)
- Operating frequency is 2.4 Ghz
- Secured communication via AEGIS client, used for secure authentication and communication

RFP and Start Dates

- RFP prepared and issued on xxxx
- Contracts signed on 6/11/2005
- Surveys and implementation steps started on 1/8/2005
- Weekly progress reports were submitted
- Final project report being prepared

Project Progress Curve

○ Progress Curve



Coverage Statistics

- Total 38 buildings are covered including
 - All academic buildings
 - Three (3) students' activity areas in student dorms
- Three (3) outdoor areas will soon be covered as well to provide ubiquitous coverage between important buildings
- Total of 314 Access Points (APs) are deployed
- All the above areas have good coverage and good signal strengths

Utilization Statistics

- Current utilization statistics are as follows
 - More than 300 users accessing wireless LAN per week
 - 30 to 50 users access at a time from different locations
- The statistics above are encouraging due to the fact that service has just been announced
- These numbers are expected to increase rapidly in coming semesters since more and more awareness sessions will also be arranged

Utilization Statistics

Contdõ

- The Projected utilization by the end of next semester is as follows
 - More than 4000 users will access wireless LAN per week
 - More than 500 users are expected to be accessing at a time
- The projected utilization is based on wireless enabled laptops distributed in all faculties and in some students as well. Moreover, personal laptops and PDAs will keep on increasing the numbers projected

Future Coverage Extension

- Wireless coverage will be extended through WiMAX in near future with the objective to cover whole campus
- WiMAX will be integrated with current WiFi infrastructure to provide ubiquitous coverage throughout the campus
- Faculty and students will be able to use wireless LAN applications while on-drive inside campus

Ongoing Wireless Projects

- Wireless LAN Voice over IP
 - SIP Clients
 - H.323 Clients
 - Wireless IP Phones

- Wireless Fax server solution

- WiMAX - WiFi integration

Challenges

- All challenges to the wireless LAN can be worked around with except the interference from external sources
- Thus the one and main threat to our wireless LAN environment is its vulnerability to interference from
 - Bluetooth devices
 - cordless telephones operating in 2.4Ghz range
 - Microwaves
- Appropriate steps have already been taken to minimize these interference effects