Outdoor Wireless at MIT

Revised Project Plan

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Team Wireless

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Project Plan Outline

I Context for the Project

In recent years, MIT has endeavored to support a wireless campus. The IS&T division has met with success in the indoor wireless environment and is now looking to expand wireless availability to outdoors. Teresa Regan, Vice President for Information Services and Technology, communicated to our team the reasons for having an outdoor wireless system. One of the motivations is to provide additional locations where students can gather for social and academic purposes. In addition, IS&T would like to make the wireless connectivity consistent throughout campus.

The objective is to implement a pilot program by the end of the summer that provides outdoor wireless in the following three areas: Stratton Student Center, Stata Center, and Killian Court. Pending the success of the pilot program, IS&T will provide wireless internet for all other MIT outdoor locations.

Considering the scale of this project, there are various uncertainties regarding the technology and environment. Specifically for technology, IS&T would like to understand the future outdoor wireless market and the corresponding technological advances. Environmentally, concerns include durability under weather conditions, structural interference of wireless signal, and ease of construction with aesthetics in mind. IS&T is also uncertain of their vendor preference.

II Purpose, Objectives and Approach of the 15.568 Wireless Team Project

Purpose:

We plan to provide IS&T with relevant information regarding the future of wireless technology and examples of other current outdoor wireless implementations. This information will help IS&T make more informed decisions for their pilot program.

Objective:

To address the technology concerns, we will first conduct preliminary research on available outdoor wireless technology. Secondly, we will interview vendor personnel to understand the evolving wireless technology market and how its direction affects our technology choice.

With regards to the environmental concerns, we will interview other universities and ISP companies with outdoor wireless internet. From these interviews, we hope to uncover their solutions to implementation problems, their criteria for selecting vendors, and their process of implementing the infrastructure. Finally, if there is enough time, our team would like to collect some qualitative data regarding campus sentiment on the outdoor wireless initiative.

III Tasks, Milestones, and Deliverables

Task		Owner	Hours	Due Date	Results
Plan development and approval					Project plan
	Submit project plan to Professor and TA	All	6	8-Mar	
	Revise project plan	All	3	8-Mar	
Literature or document search and review					Understanding of wireless technology and what vendors and schools are doing
	Online research for wireless technology and talk to IS&T about remote access to wireless docks	Harel	3	15-Mar	
	Vendors research	Janice	3	15-Mar	
	Universities research	Ashvini, Jessica	3	15-Mar	
Field data gathering (such as interviews in person or by phone, survey by phone or questionaire, etc.)					Insights from vendors, ISPs, and schools on outdoor wireless technology implementation
	Vendors research	Janice	5	5-Apr	
	Universities research	Ashvini, Jessica	5	5-Apr	
	ISPs	Harel	5	5-Apr	
Analysis and preliminary conclusions					Write-up on findings and use them to answer our objectives
	Vendors	All	6	12-Apr	
	Universities	All	8	12-Apr	
Presentation by team (must include the representative from the organization, either in person or via video or teleconference)					PowerPoint presentations
	Preliminary presentation to stakeholders (IS&T)	All	6	21-Apr	
	Revised and final presentation	All	6	28-Apr	
Final report (include outline of report)					Complete 20-page final report
	Complete report on final conclusion to MIT IS&T	All	20	10-May	

IV Uncertainties, Risks and Opportunities, and Planned Responses

#	Risk Statement		(Scale 1-3)	(Scale 1-3)	(Prob * Impact)	Mitigation	Contingency	Triggers
	Condition	Consequence	Probability	Impact	Exposure			
1	Team members are overloaded	Poor Project Delivery	2	3	6	Weekly Meetings, Frequent Email Contact, Good Scheduling Practices	Redistribute tasks, Narrow Focus of Project, Redefine Objectives	MIT is difficult, Project scope becomes too large
2	Vendors, ISPs, Colleges are unwilling to share information	Lack of information to provide to IS&T	2	3	6	Use personal contacts of IS&T, Use MIT name, Use student government angle	Change our objective to focus on information available	Unproffesional communication, Confidentiality Issues, Conflict of interest to vendors
3	Team Member Conflicts/Internal Problems	Team atmosphere/moral degrades, Slow in project development	2	2	4	Shorter, more frequent meetings, informal hang out time	Intervention, team counseling sessions	Too much time together, Stress
4	IS&T does not like presentation/report	Our impact is minimal	1	2	2	Update regularly with champion, dynamically adjust project to feedback	Create a post mortem for our findings and include recommendations for further research	Poor communication between champion and group

V Critical Success Factors

Success Statement			
Condition	Consequence	Assurance	Contingency
Access to interviews with relevant persons	Relevant and effective information for our project's objectives	Tenacious, professional, and efficient in our contact methodology	Go through a third party (IS&T, Prof. Gibson) to find personal contacts
Team Member Dedication	Excellent teamwork, efficient meetings	Build team moral, Hang out together outside of project, Address personal conflicts immediately	Divide up the project milestones so that team members can work separately
Basic knowledge of underlying technology	Better understanding of IS&T's needs	All members of team spend time learning the underlying technology	Depend on computer science major to understand and explain technology
Access to IS&T's data on current implementation and their plans for the future	Better recommendations for integration	Meet with IS&T representatives effectively and often to learn about current infrastructure	Provide a higher level view of possible project implementations

VI Gantt Chart

ID	Task Name	Start	Finish	Duration	Resource Names
1	Meet with Champion	2/24/2005	2/24/2005	1d	All
2	Initial Project Plan	2/24/2005	3/3/2005	6d	All
3	Revised Project Plan	3/4/2005	3/8/2005	3d	All
4	Online Technology Research	3/8/2005	3/15/2005	6d	Harel
5	Collect information from IS&T on current wireless implementation	3/8/2005	3/15/2005	6d	Harel
6	Vendor Research	3/8/2005	3/15/2005	6d	Janice
7	University Research	3/8/2005	3/15/2005	6d	Jessica, Ashvini
8	Status Report	3/15/2005	3/17/2005	3d	All
9	Field Research on Vendors	3/15/2005	4/4/2005	15d	Janice
10	Field Research on Universities	3/15/2005	4/4/2005	15d	Jessica, Ashvini
11	Field Research on ISPs	3/15/2005	4/4/2005	15d	Harel
12	Status Report	3/29/2005	3/31/2005	3d	All
13	Analysis & Preliminary Conclusions	4/5/2005	4/12/2005	6d	All
14	Status Report	4/12/2005	4/14/2005	3d	All
15	Preliminary Presentation to Stakeholders	4/12/2005	4/21/2005	8d	All
16	Revise & Practice Presentation	4/21/2005	4/27/2005	5d	All
17	Status Report	4/26/2005	4/28/2005	3d	All
18	Final Presentation	4/28/2005	5/5/2005	6d	All
19	Final Report to MIT IS&T	4/5/2005	5/10/2005	26d	All