Outdoor Wireless at MIT

Project Status Report #1
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Team Wireless
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Provide a dashboard light of the overall prospects for achieving the project as laid out in the original project plan: green, yellow, or red

Currently, the project is on schedule and has a good chance for achieving the project as we have originally planned. The project is status is green.

I. Accomplishments
The accomplishments we have experienced thus far include the approval of our project plan by our champion and professor, a basic understanding of outdoor wireless industry and technology, and the preliminary research of university usage of outdoor wireless technology.

When conducting online research on outdoor wireless device vendors, we learned that Enterasys, one of the vendors that MIT was considering since they have used Enterasys for indoor wireless, has discontinued its outdoor wireless solution. However, we have gathered information about 5 other outdoor wireless solution vendors

In addition to research online, we have contacted five universities asking for information on their outdoor wireless. Central Washington University has called us back and is ready to answer any questions we have. Carnegie Mellon University replied via e-mail stating that they have a CD with the information we need and they will send it to one of the team members. University of South Carolina gave us a contact that can get us the information we need. The other universities have not replied yet. The prompt responses and willingness to assist us will help us move forward quickly in our research.

We have also discovered that wireless technology 802.11a/b/g is a very viable option for providing network access outdoors. Even in the presence of harsh environmental factors, such as heavy rain or snow, the signal is barely affected, and therefore does not bring down a wireless link. The only real difference between indoor and outdoor wireless access points is that the outdoor access points require a outer casing which protects the electronics from environmental factors. Additionally, you may not have to run wiring to the access points for network connectivity if you mount wireless bridges on building that already have lines installed. The wireless bridge then serves as the connection between the outdoor wireless access point and the wired connectivity on the network.

II. Issues
A foreseen risk that actually occurred is the fact that there is limited amount of information available on the vendors' and universities' websites. We have found in researching thus far is the lack of specific information on outdoor wireless technology in universities. On university websites, we couldn't find information regarding solutions to implementation problems, criteria for selecting vendors, and processes for implementing the infrastructure. This doesn't affect the uncertainties or risks portion of our plan too much because we plan on interviewing key people to get the facts we need. Another foreseen risk is that since we are not experts on wireless technology, sometimes it is difficult for us to make accurate comparisons across vendors in terms of their strengths and weaknesses

It has also proven difficult to meet in person with the contact person for the technical side of the wireless technology. It is important that any outdoor implementation of wireless technology must integrate with the current remote management system that IS&T has implemented for their existing wireless access points. However, a meeting is tentatively scheduled with the appropriate persons immediately after spring break.

III. Actions to be taken
We think that we are on track with the project plan and there haven't been any new issues that require any revisions to our original schedule. However, we will continue to conduct extensive research in order to find relevant information for our report.

As stated in our project plan, the next step after online research is to conduct field research by actually interviewing different vendors. This stage will be accomplished by April 5. The following vendors will be researched in further depth through phone interviews: 1)Avaya, 2)SmartBridges, 3)D-Link, 4)InPath Devices, 5)National Datacomm Corporation.

We will be calling the universities to interview them regarding implementation problems, criteria for selecting vendors, processes for implementing the infrastructure, and any suggestions they may have for MIT. We need to call the universities as soon as possible so that we show our appreciation for their interest in helping us.

IV. Reflections and Learning
This project fits in very well with our current module of Implementation and Change. Implementing outdoor wireless access for the entire MIT campus will be a very drastic change and the implementation of it is no simple task. Through speaking with our project champion, Ms. Regan, it is interesting to see how large organizations, such as MIT's IS&T, plan for large-scale future changes. The amount of uncertainty is overwhelming, and it's part of our role, as a research team, to help clear up some of those uncertainties.

Our team is definitely learning a lot, both internally and externally. Internally, we are learning how to communicate more effectively with each other, and how to help keep each other on track. Externally, we are learning how to digest the vague information we collect online and try to make sense out of it together. In addition, as soon as we get to interview the schools, we will probably learn the different way universities approached the implementation, the problems that arose during implementation, and the corresponding solutions universities derived to resolve the issues. It was interesting to see that universities were so willing to help that they replied back the next day with how we could find the information we needed. We will also be able to use our knowledge from class to suggest ways for MIT to avoid the problems that are commonly seen in managing IT projects.