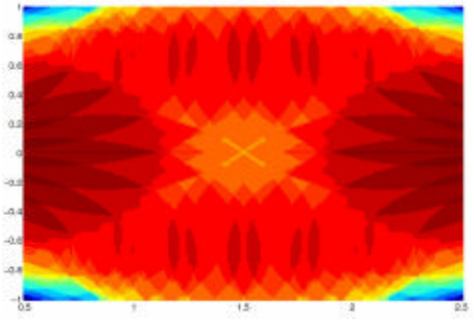
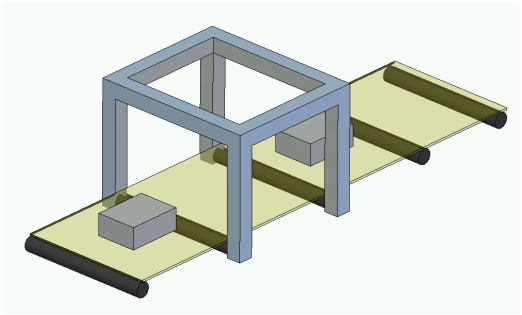
University of Pittsburgh RFID Center of Excellence

Tuesday May 6, 2008
Time: 6:30PM
University of Pittsburgh
Room 360 Benedum Hall

Lin Wang, RFID Center / Industrial Engineering





"Optimal antenna placement for pallet, case and item level applications for both static and moving conditions"

One of the obstacles that prevent RFID from replacing bar codes in supply chains is that it has not reached 100 percent read accuracy yet. This is a great concern because items may become lost in the supply chain if there are many inaccurate reads, and because suboptimal inventory decisions could result from inaccurate information. Multiple antennas have been used commonly in industry to increase the likelihood of successful reads. This presentation will focus on describing a methodology for optimal placement of multiple antennas that has been developed based on the radiation pattern of both the reader and the tag antennas, the portal size and the implementation level of RFID (pallet, case or item level). The results show that the optimal antenna placement differs based on the specific application. The results can also indicate what portions of the tag reading field will be difficult to read given the placement of multiple antennas. Further analysis in this study permits one to assume that tagged items move through the portal and incorporates the Gen2 protocol into the analysis. Finally, the methodology also provides insights into what tag orientations may be difficult to read for a given reader antenna configuration.

Questions and Discussion: 7:00PM
RFID Center Members will meet at 5:00PM in Room 330 Benedum Hall
For Additional Center Information: Call 412 / 624 - 9682
or email: rfid@pitt.edu