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- EDUCATION
- ◇ **Indian Institute of Technology, Bombay**
MTech. in Information Technology, graduating: July 2005.
Master's project: *Mitigating the Reader Collision Problem in RFID Networks with Mobile Readers*
(Current) **CPI: 8.66/10**
 - ◇ **K. K. Wagh College of Engineering**
Bachelor of Engineering in Computer Science and Engineering, July 2003.
Aggregate: 65.46%.
 - ◇ **Maharashtra State Board of Secondary and Higher Secondary Education.**
Higher Secondary Certificate(HSC) Examination, March 1999.
Aggregate: 80.33%.
 - ◇ **Maharashtra State Board of Secondary and Higher Secondary Education.**
Secondary School Certificate(SSC) Examination, March 1997
Aggregate: 60.66%.

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- MASTERS
THESIS
- ◇ **Mitigating the Reader Collision Problem in RFID Networks with Mobile Readers.**
Radio frequency identification is a generic term for technologies that use radio waves to automatically identify individual items. RFID system is mainly used in identifying and tracking objects like container or items in the industries/supply chain. The RFID tags are transponders which respond back with its identification number when the reader sends a radio wave for reading the tags. Interference is caused when more than one RFID reader tries to read the same tag at the same time referred to as reader collision problem. Moreover the RFID tags are not developed enough to select a particular RFID reader to communicate with as seen in cellular systems. The project aims at developing a MAC protocol for mitigating the reader collision problem in a scenario where the readers are made mobile in order to reduce the cost.

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- PROJECTS
- ◇ **Performance Analysis of Colorwave Protocol:**
Colorwave is a distributed TDMA based protocol to avoid the reader collision problem in RFID networks. This project simulated this protocol in Java to study the effect of number of nodes, the mobility of the nodes on the system throughput and number of collisions in the system.
 - ◇ **E-Biz Supply Chain Simulator:**
This project simulated the supply chain management with different patterns of demands at the retailers. The tool generated graphs and costs which could be analysed to suggest how much and when to place the order and also suggest appropriate measures like increasing the buffer stock, trucks etc.
 - ◇ **Distributed Matrix Multiplication using JINI Services:**
This project demonstrated distributing the task of matrix multiplication amongst various ideal systems over the LAN using Javaspaces and Jini. It also demonstrates fault tolerance like failure of client machines.

◇ **An STG to NuSMV Converter:**

State Transition Graphs is an interpreted petrinet in which transitions represent signal changes. NuSMV is a symbolic model checker tool which is used to check finite state systems against specifications and properties of the model. The project was to convert a given STG into NuSMV input format which would be further used to check the properties.

SEMINAR
AND
TERMPAPERS

◇ **TDMA for QoS Routing in Ad Hoc Mobile Wireless Networks**

With the increasing usage of ad hoc networks, applications like voice streaming is in high demand in such networks. For such applications with soft real time deadlines, QoS routing is essential. This seminar concentrates on the TDMA implementation for QoS routing in mobile ad hoc wireless networks.

◇ **Distributed Token Circulation and Mutual Exclusion for Mobile Ad Hoc Networks:**

Token circulation is a well known concept used in a number of applications like mutual exclusion, group communication and message ordering. This termpaper surveyed a number of existing algorithms for token circulation in mobile ad hoc networks.

TOPIC OF
INTERESTS

- ◇ Wireless Networks and Protocols
 - ◇ Distributed Computing
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EXTRA
CURRICULAR
ACTIVITIES

- ◇ Events Secretary 2004-2005 of the IT Association of IIT Bombay
 - ◇ Organised Convergence-05 A Workshop on Enterprise Computing at IITB in March 2005
 - ◇ Organised Prabhat Computer Workshop at IITB in August 2004
 - ◇ Active in Organising Convergence-04 A Wireless Workshop at IITB in March 2004
 - ◇ Participated in State Level C Programming contest held at AIM. Chalisgaon in 2002
 - ◇ Participated in Concepts 2001, a C programming contest held in Pune Institute of Computer Technology, Pune
 - ◇ Organised Art Exhibition in college annual gathering in February 2001
 - ◇ Secured 5th rank in Kaprekar scholarship exam
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REFERENCE

Available on request.