

Team 07 – The Caffeinators

Mid Semester Demo



Tools of the trade



Accomplishments

- Successfully booted into TS-7200's onboard linux distro
- Successfully booted TS-7200 into Debian from Compact Flash card
- Successfully connected via ethernet to a Local Area Network

Risks

- Possibility of collisions.
Will use random backoff times or possibly coordinate between tags in a token ring like way.
- Possibility of lost "I can't hear you" messages.
Broadcast for a period of time insuring someone is awake to hear it.
- Possibility of excessive power consumption.
Unit sleeps while not interacting with unit, reason for not using tcp connections.

Tha Demo

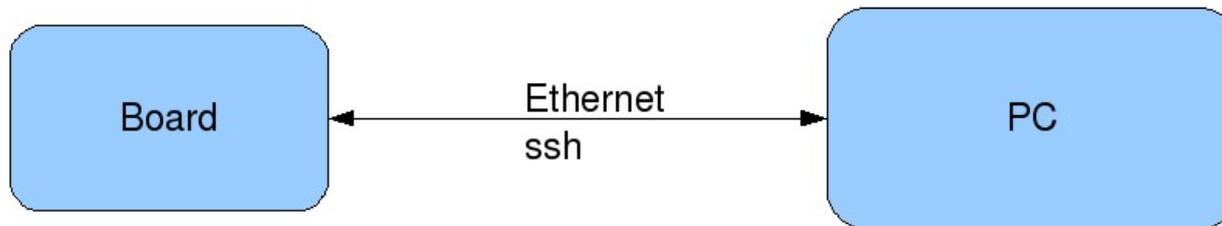
- Turn on unit via serial
- Establish TCP connection supporting ssh protocol

Tha Demo (Illustrated)

Setup



Demo



Immediate Goals

- Boot from NFS
- Setup cross compilation toolchain
- Compile wifi stick drivers
- Configure board to use batter power

The Road Ahead

- Communicate with wifi array
- Collect wifi signal statistics
- Implement protocol to enable distributed network of tags to communicate with array in a decentralized fashion