

Project 4 Road Map

Prototyping of 5G for Smart Ag, Smart UAV, Smart Cars

Milestones

1. Long Term Evolution (LTE), Cyber Physics Scheduling (CPS)
2. Open Air Interface (OAI) understanding
3. Unified Cingular Scheduling
4. Open Air Interface (OAI) implementation/simulation
5. Debugging Simulation of implemented OAI
6. Hardware prototype

Milestones in parallel

1. LTE, CPS and 2. OAI understanding project 4 group will be broken down into two teams

- Team Freedom (LTE/CPS)
Team members:
Hye-Sung Moon
Jared Gorton
Ted Miller
- Team Independence (OAI) Team will Include
Team members:
Jaime Zetina
Anthony Benson
Khanh Luu

Timeline for milestone one and two

- ▶ Team Freedom will be tasked to read 4G KTE - Advanced Pro and The Road to 5G
- ▶ Read approximately 2 to 3 chapters per week in preparation of weekly meeting to present to the rest of the project group.
- ▶ Read Cyber physical scheduling paper
- ▶ Consider problems presented in the book and how can we apply the CPS paper to provide solutions for mentioned problems
- ▶ The completion of this task is currently set for Oct 12th

Time line for milestone one and two

- ▶ Team Independence will be task with become familiar enough with OAI to demonstrate operational knowledge of the platform to the rest of the group possibly two tutorials a week
- ▶ Become familiar with Graph Theory and present to the rest of the group
- ▶ Read Cyber physical scheduling paper
- ▶ Consider problems presented in the book and how can we apply the CPS paper to provide solutions for mentioned problems
- ▶ The completion of this is task is currently set for Oct 12th

3 Unified Cingular Scheduling

- ▶ Solidify our project name
- ▶ Determine the particular application we will work with, UAV's, or UCAR's
- ▶ begin to devise an algorithm
- ▶ The completion of this is task is currently set for Oct 26th

4 Open Air Interface (OAI) implementation/simulation

- ▶ OAI implementation using our understanding of CPS
- ▶ Use algorithm in our OAI
- ▶ Using OAI along with SUMO software platform design simulations for our project
- ▶ Begin to debug OAI and sumo simulations
- ▶ The completion of this task is currently set for Dec 14th

5 Debugging Simulation of implemented OAI

- ▶ Bring our simulations to completion by debugging our prototype network
- ▶ The completion of this task is currently set for Feb 28th

6 Hardware prototype

- ▶ Based on the simulation prototype build hardware.
- ▶ Complete all task prior to graduation time boys.

Task for this weekly meeting

Sept. 21. 2018

- ▶ Team freedom Present knowledge gained from reading first set of readings
- ▶ Team Independence Demonstrate any knowledge gained form OAI
- ▶ Both teams discuss CPS and relevant topics that can help us brain storm this project.
 - ▶ Limited bandwidths, scheduling, safety applications, reliability in scheduling
 - ▶ How can we make m2m more stream line to avoid to many base stations