

Group number: May 1715

Project title: Internet of Machines

Client &/Advisor: Vermeer, Keith Bryant / Dr. Sang Kim

*Team Members/Role: Dean VanEvery/Team Leader, Cody Lample/Key
Concept Holder, James A Kluesner, Matthew Gustin/Webmaster, Sam
Ellis/Communications Leader, Yulin Song, Kojo Otchere-Badu*

o **Weekly Summary (Short summary about what you did this week)**

We met with our representatives from Vermeer this week at their research facility here in Ames where they showed us several examples of technologies and resources they use day-to-day related to our project. We discussed matters related to legal paperwork as well as what would be made available to us as the project progressed.

Additionally, we met an extra session over the weekend to solidify our project plan, discussing hardware and software options that we could use in our final implementation. Much of this was used in working towards the first draft of our project plan for this week.

o **Past week accomplishments (please describe as what was done, by whom, when)**

- Matt Gustin – Researched various ways to send sensor data to a RaspberryPi
- Dean VanEvery – Researched existing products similar to our project goals.
- Sam Ellis – Researched more regarding the pros and cons of using WLAN versus cellular communication. Looked into possible sensor hardware usable on the copter and network protocol options for returning data.
- Kojo Otchere-Badu – Researched efficient and secure ways of transmitting information among the various devices required for the project.
- Cody Lample - Research various dedicated server/VM options, and server implementations.
- James Kluesner – Created a work plan and project schedule, as well as created a risk/feasibility assessment for the project.
- Yulin Song – Analyzed suitable hardware solutions for board sensors.

o **Pending issues (if applicable)**

We've had slight problems getting in contact with our adviser, and are working towards more in-person communication to correct this issue.

o **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Cody Lample	VM/Dedicated Server options Research, concept sketch and system block diagram sections of plan	4	10
Dean VanEvery	Researched existing products	3	10
James Kluesner	Work schedule/plan, risk and feasibility assessment	8	12
Matt Gustin	Communications research, Functional and non-Functional requirements section of project plan	3	8
Sam Ellis	Operating systems and networking research, related sections of project plan	4	10
Yulin Song	Experimented with several possible hardware solutions.	3	10
Kojo Otchere-Badu	CRC error detection on sender and receiver side.	5	9

o **Plan for coming week (please describe as what, who, when)**

We've divided research and information compilation for the project plan draft between our group members in the following format:

- Matt Gustin – Functional and Nonfunctional Requirements
- Dean VanEvery – Market and Literature Survey
- Sam Ellis – Operating Environment and User Interface
- Kojo Otchere-Badu – Deliverables
- Cody Lample - Concept Sketch and System Block Diagram
- James Kluesner – Project Schedule
- Yulin Song – Resource Requirements and Costs