



*Supervisor: Kevin Keryk
Intern: Courtney Ngai*

Courtney Ngai EM Global Solutions Team

Accelerating Your Success™

Project Mission

1. IBM Bluemix Project

Enhance the appearance and function of the web dashboard used to display the temperature sensor data from the MicroZed Industrial IoT Kit via any web browser. To be accomplished via IBM Bluemix Services.

2. PetaLinux BSP Project

Update the previous PetaLinux 2015.4 Board Support Package (BSP) to the current upgraded PetaLinux 2016.2 BSP for 3 separate production Avnet boards:

- MicroZed SOM Board
- PicoZed SOM Board
- Zync Mini-ITX Board



Project Accomplishments

1. IBM Bluemix Project

- Investigated and researched IBM Bluemix Services for compatibility and functionality with Avnet IoT boards.
- Modified IoT IBM Bluemix user interface dashboard web application code using HTML, JavaScript, and CSS on respective code modules.
- Demonstrated IBM Bluemix application and new dashboard at Avnet Field Applications Engineering Expo with production MicroZed Industrial IoT Kit.
- Attended 1-Week Avnet FAE Expo to assist in display and support of both Zedboard and Xilinx board offerings and their capabilities.

2. PetaLinux BSP Project

- Updated PetaLinux Board Support Package builds via modification of build scripts on Linux OS.
- Officially released board status from version 2015.4 to version 2016.2 for Avnet Zedboards: PicoZed, MicroZed, and Zync Mini-ITX.
- Presented webcast presentation to upper management on the PetaLinux BSP update, improvements and future release roadmap.



Key Learnings

Professional Aspects

- Project Management: Goals, Strategy and Desired Outcomes
- Time Management: Task Prioritization and Scheduling
- Communication: Interaction and Protocol
- Critical Thinking and Process Review
- Public Speaking and Presentation of Results

Technical Aspects

- IBM Bluemix (PaaS) Services
- Interaction of software and hardware on circuit designs.
- Board Support Packages and their necessity for user application design and implementation.
- IoT and the business need for data connectivity.
- Creating and implementing business cases from the information provided by IoT data.



Thank you!



5



11 August 2016

