Raytheon

Customer Success Is Our Mission

Raytheon Senior Design Project Android Based Situational Awareness: Moving Map

Gate 6/7: SRR/PDR

November 14, 2012

Project Overview

Background: There are no current Raytheon non-web based mapping applications on an Android device.

CONOPS: (Concept of Operations) The application is intended for soldiers, law enforcement officers, or other personnel without access to the Internet. The application will be compatible with Android devices.

Key Assumptions:

- Raytheon will provide one 10” Samsung Galaxy Tablet
- Raytheon will provide one 7” Samsung Galaxy Tablet

Critical Success Factors:

- Requirements approval by 11/15
- Design Approval by 11/26

Buyoff Criteria:

- Final Release Demonstration for Raytheon Management
- Successful completion of all university project requirements

Deliverables:

- Program Documentation (Schedule, etc.)
- Requirements/Architecture
- System Design
- Source Code/Executables
- Demonstrations

Next Milestone:

Critical Desgin Review (CDR) – 13 Feb 2013

Functional Requirements

ID	Requirement	Priority
FR0	The system shall let the user pan the map by a dragging gesture	Objective
FR1	The system shall let the user zoom using an on-screen button	Threshold
FR2	The system shall let the user zoom using pinch gestures	Objective
FR3	The system shall let the user zoom using double tap	Objective
FR4	The system shall store map tiles on the device	Threshold
FR5	The system shall display map tiles which are stored on the device	Threshold
FR6	The system shall be able to pull map tiles which are stored on a local server and store them on the device	Objective
FR7	The system shall georeference the location of the device	Threshold
FR8	The system shall let the user center on current location	Objective
FR9	The system shall store multiple map types	Threshold
FR10	The system shall let the user choose the map type	Objective
FR11	The system shall store points of interest as a map overlay	Objective

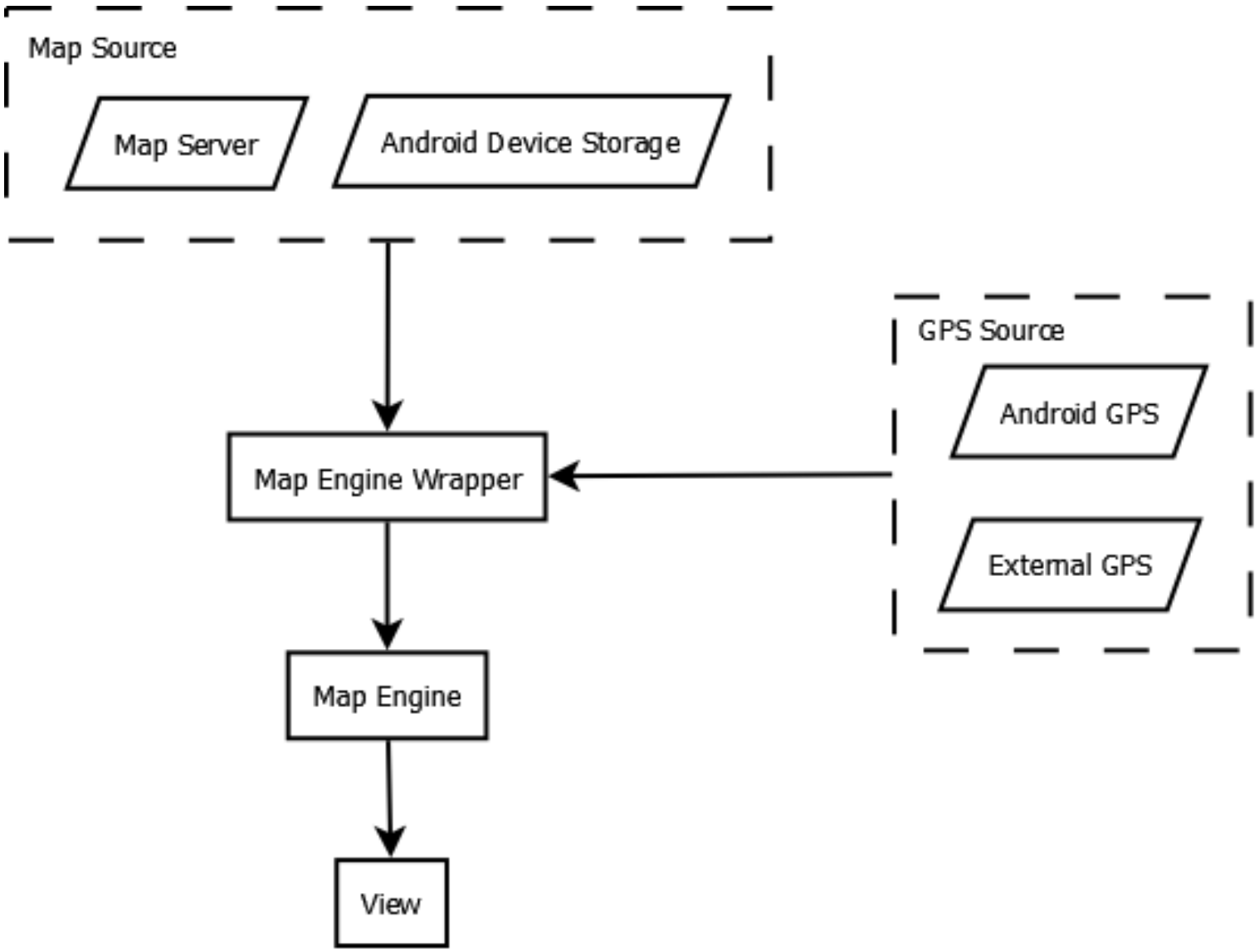
Functional Requirements

ID	Requirement	Priority
FR12	The system shall display points of interest overlays	Objective
FR13	The system shall let the user choose which overlays are displayed	Objective
FR14	The system shall let the user add custom points of interest	Objective
FR15	The system shall let the user choose which overlay the custom point of interest is added to	Objective
FR16	The system shall let the user create new overlays	Objective
FR17	The system shall display a compass	Threshold
FR18	The system shall let the user toggle heading/north up	Threshold
FR19	The system shall let the user change default settings via a settings menu found in the menu bar	Threshold
FR20	The system shall let the user access a help menu via the menu bar	Objective

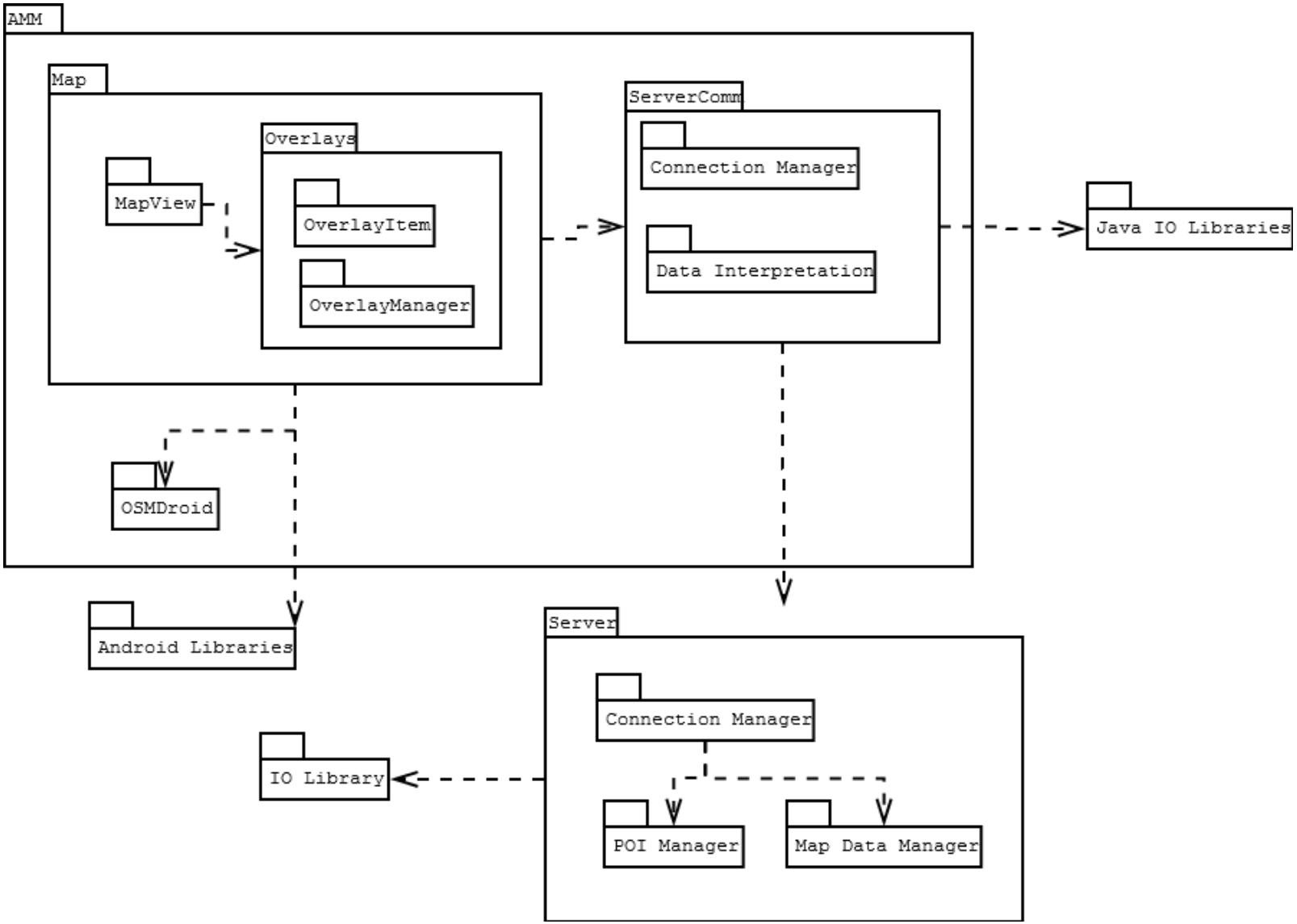
Deliverable Diagrams

- High Level Overview
- Package Diagram
- System Sequence Diagrams
  - Get Map Tile
  - Get POI
- UML Class Diagram
  - Part of Final Design

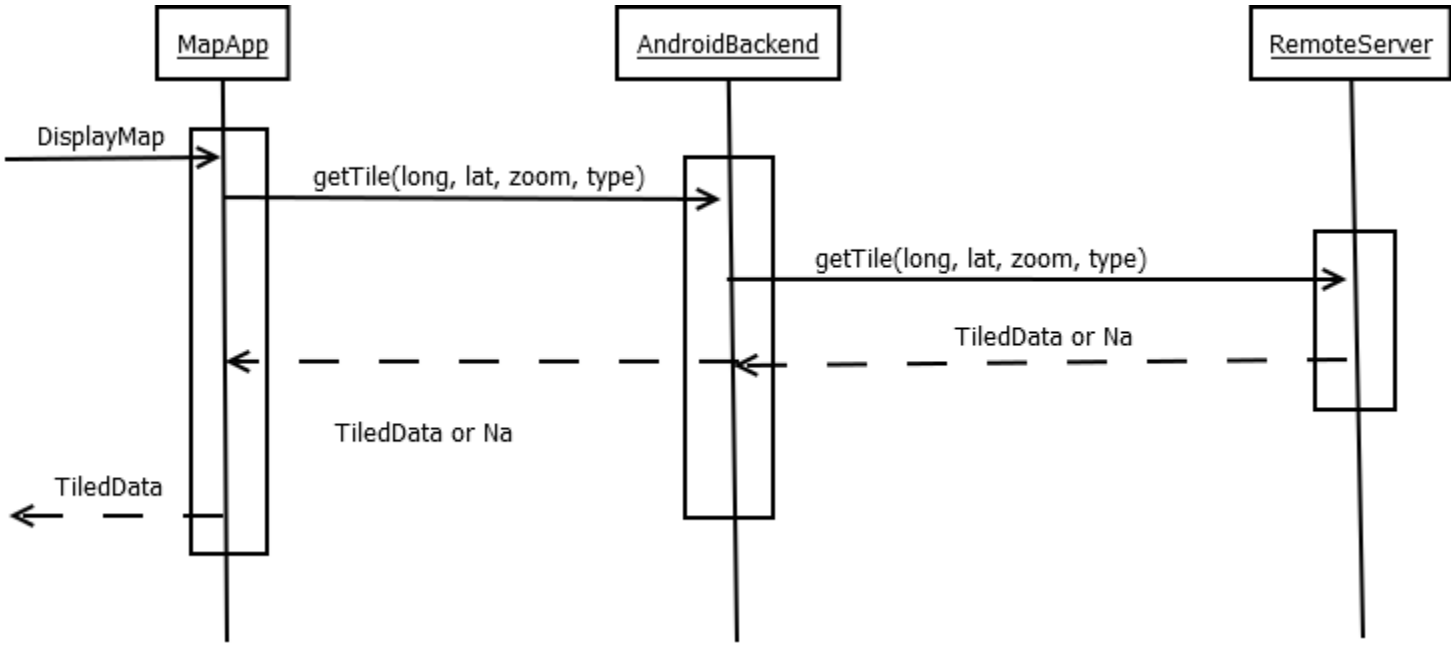
High Level Architecture



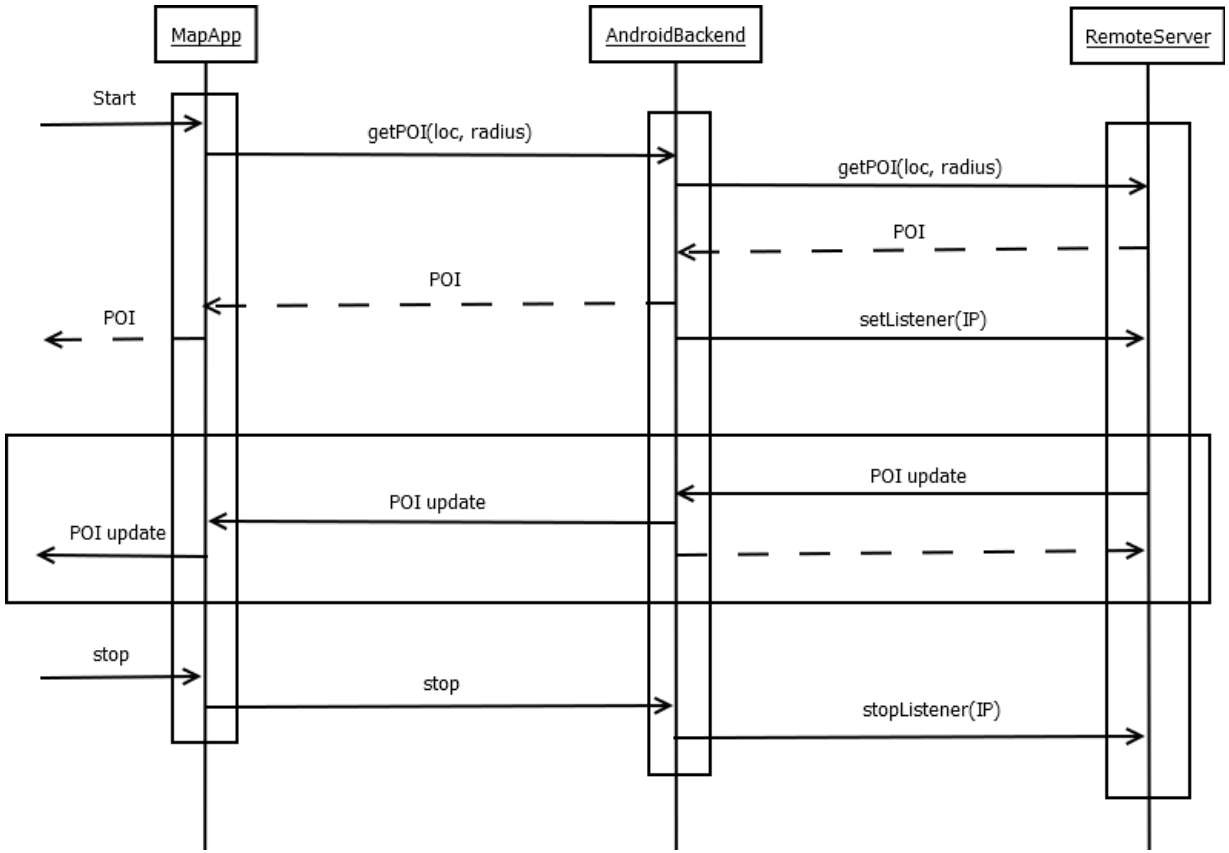
Package Diagram



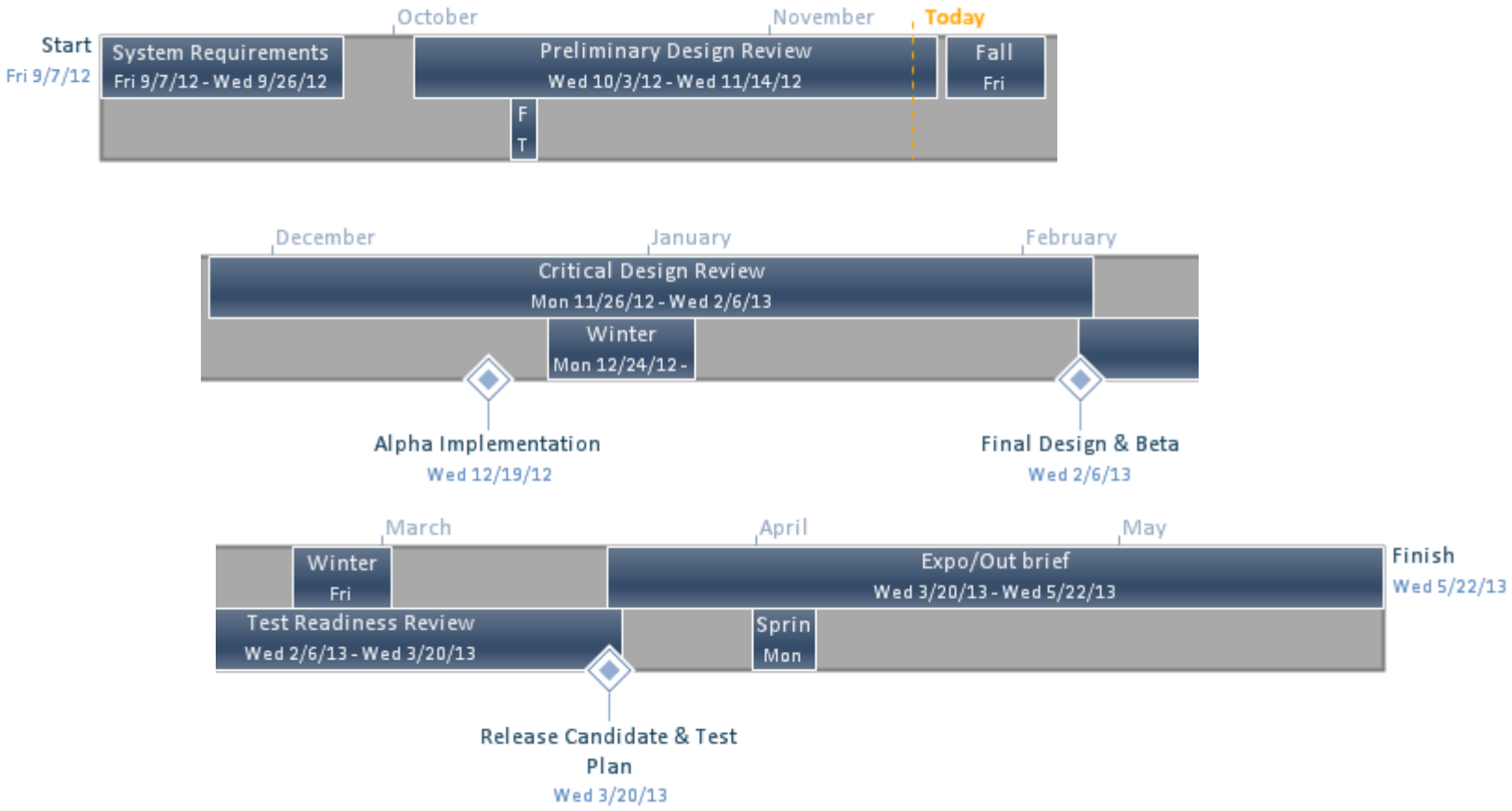
Get Map Tile Sequence



Get POI Sequence



Project Schedule



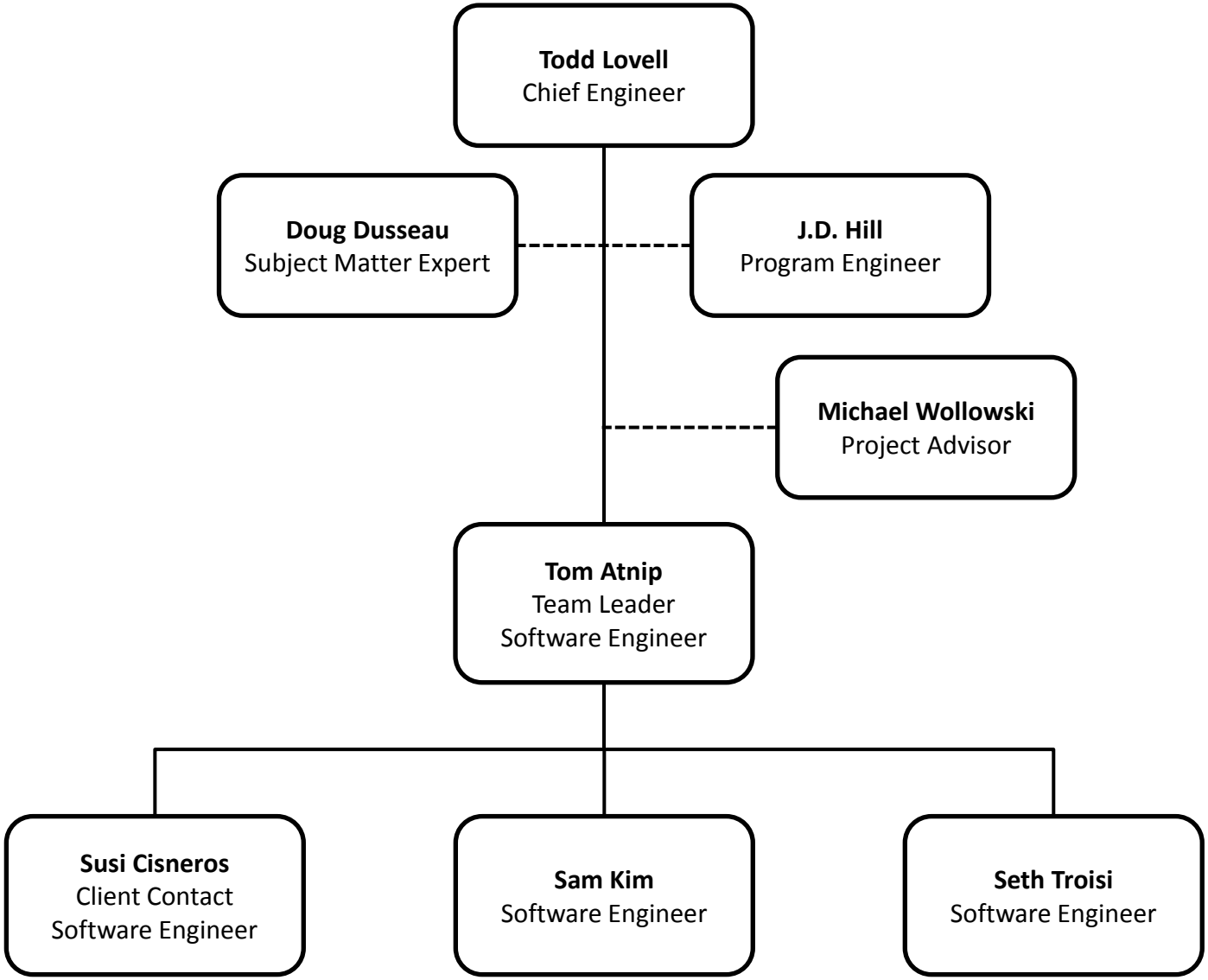
BACKUP SLIDES

Include extra slides if discussion goes ‘deeper’ and all slides from after meeting

Project Schedule & Milestones

- System Requirements Review: September 26th
- Preliminary Design Review: November 14th
- Alpha Release: December 19th
- Beta Release: February 6th
- Critical Design Review: February 6th
- Test Readiness Review: March 20th
- Final Release: April 17th
- Expo/Out brief: May 22nd

Project Team



Assumptions, Risks, & Opportunities

- Risks
  - Performance of the system
  - Organizing data in the correct format in a timely manner
- Assumptions
  - There exists an open source mapping engine for Android devices
  - The mapping engine does not require an internet connection to run
  - Android devices can connect to a local server
- Opportunities
  - Finding a feature complete mapping engine