Acronym	AcMapView
Project	**Active Aircraft Viewer with Map**
Doctype	**Requirements**
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Chapter 1

Project Drivers

1.1 Purpose of the Project

1.1.1 Vision Statement

This project aims at developing an application that shows the active aircraft in range of the ADS-B receiver on a map provided by a web server.

1.1.2 Project Outcomes

The Java application reads aircraft messages.

The Java application decodes aircraft messages.

The Java application transforms aircraft message data into aircraft data.

The Java application displays decoded aircraft data.

The Java application displays the aircraft in range on a map.

1.1.3 Learning Objectives

After having completed this project, as student, you can ...

- integrate map api.
- develop simple map applications.

1.2 Stakeholders

1.2.1 Project Team

Various members and roles.

1.2.2 Product Users

Local Flight Control Engineer, User. Priority: **Key User**.

Chapter 2

Functional Requirements

2.1   Functional Requirements

AcMapView.F.10   Start AcMapView   *essential*

Feature   In order to get an overview of the local flight traffic, as a flight control engineer, I want to be able to observe the aircraft that are currently in range.

Scenario

Given the application is off

When I start the application

Then the application should shows the aircrafts in range on a map

AcMapView.F.40   Observe Aircrafts on Map   *essential*

Feature   In order to get an overview of the local flight traffic, as a flight control engineer, I want to be able to observe the aircrafts on a map.

Scenario

Given an aircraft

When the aircraft is in range of the map center

Then it shall be shown as a plane on the map at its correct position

Chapter 3

# Non-Functional Requirements

3.1   Look and Feel Requirements

AcMapView.NF.10   Graphical User Interface (GUI)   **essential**

Feature The application user interface shall be realized as graphical user interface with a map.

Feature : Existing Functionality from Acamo The GUI window shall be organized in terms of a list of the aircrafts in range and a pane for the selected aircraft.

Feature : New Functionality in AcmapView The display of the map in the GUI shall be according to the figure below.
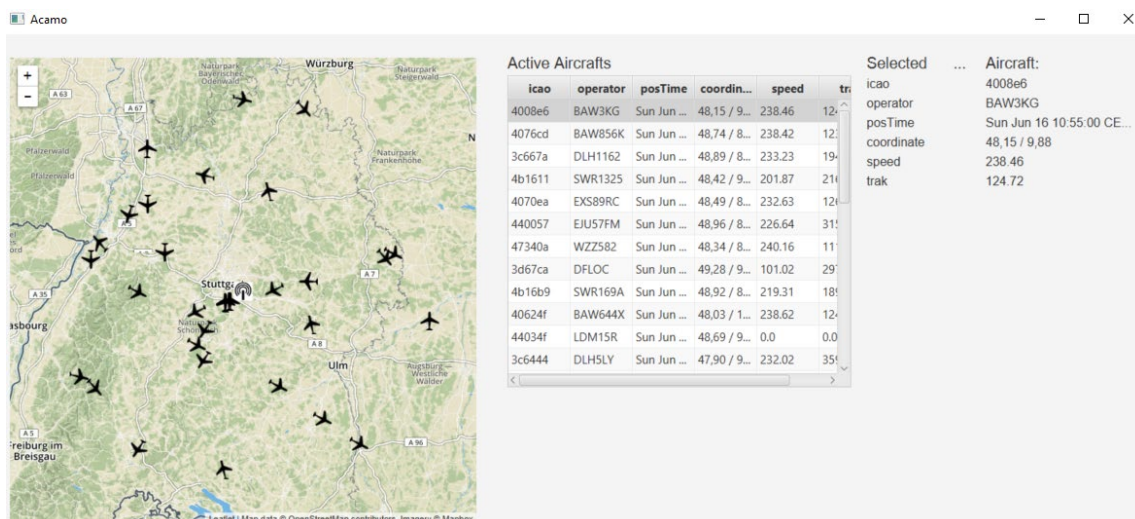
3.1   Performance Requirements

Acamo.NF.20   Timing   **essential**

Feature   The list of active aircraft shall be updated at least once per second.

3.2   Implementation-Specific Requirements

Acamo.NF.50   Test Driven Development   **essential**

In order to ascertain sufficient testing of the product, the implementation must be carried out following a test-driven development approach.

3.4   Maintainability Requirements

Acamo.NF.70   Documentation   **essential**

In order to ascertain high understandability, the source code must be self-explanatory.

Acamo.NF.80   Cohesion and Coupling   **essential**

In order to support high maintainability, the modules of the system must be realized with high-cohesion and low coupling.

Acamo.NF.90   OO Design Principles   **essential**

In order to support high maintainability, the other well-known principles of good object-oriented design must also be applied.