

Functional Requirements for the SAMBUG project

COS301



Abrie van Aardt 13178840
Werner Mostert 13019695
Kele-ab Tessera 13048423
Keagan Thompson 13023782
Michelle Swanepoel 13066294

Vector
Software Developers

May 2015

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1 Background

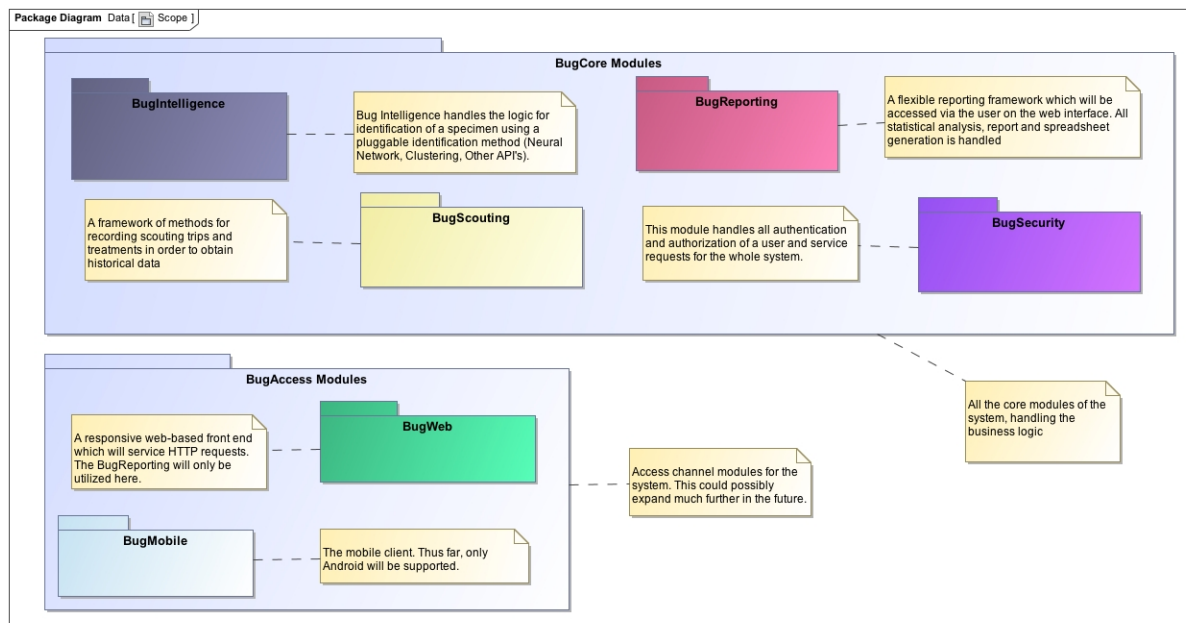
South Africa is currently the largest producer of macadamia nuts in the world. One of the main production and quality limiting factors is the incidence of stink bug damage.

Accurate timing of chemical sprays rely on accurate scout data and economic threshold levels of the insect pests in an orchard. However, scouting for these pests has a major shortfall, namely the accurate identification of pests, despite efforts to train growers and scouts by various means. Area wide control of pests and diseases is a concept that has been considered, but with the lack of scout data from across and within growing regions it is impossible to make such recommendations.

2 Vision

An innovative approach to handling the management and acquisition of scout data is to develop a smartphone application that is able to identify specific hemipteran species by making use of the built-in camera of the smartphone. This application should ideally be able to make use of the smartphones built-in GPS to perform geotagging and uploading information to a central database.

3 Scope



4 Architecture requirements

4.1 Access channel requirements

4.2 Quality requirements

4.3 Integration requirements

4.4 Architecture constraints

5 Functional Requirements and Application Design

5.1 Domain Model

5.2 BugScouting

5.2.1 Module Scope

5.2.2 Use Cases

5.3 BugIntelligence

5.3.1 Module Scope

5.3.2 Use Cases

5.4 BugSecurity

5.4.1 Module Scope

5.4.2 Use Cases

5.5 BugReporting

5.5.1 Module Scope

5.5.2 Use Cases

6 Open Issues