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jShark
Network Protocol Analyzer for Android

Development Case

Version <1.0>

Revision History

Date	Version	Description	Author
24/07/2013	1.0	Initial version of Development Case	Arukgoda J.S.

Table of Contents

Development Case

1. Introduction

1.1 Purpose

The purpose of this documentation is to provide the reader with the details on the development process used to create 'jShark' and how that process is adapted.

1.2 Scope

This document describes the development process of 'jShark', a network protocol analyzer for Android.

1.3 Definitions, Acronyms, and Abbreviations

- RUP – Rational Unified Process
- NPA – Network Protocol Analyzer

1.4 References

[1] jShark, Project Feasibility Report, Version 1.0, @Arukgoda J.S.

[2] jShark Project Vision Document, Version 1.0, @Arukgoda J.S

[3] jShark, Project Schedule, Version 1.0, @Arukgoda J.S.

1.5 Overview

'jShark' is planned to be developed under RUP. This document describes how RUP is adapted for this project. Section 2 provides an overview of the development case. Section 3 presents the workflow and major artifacts of the RUP disciplines.

2. Overview of the Development Case

2.1 Lifecycle Model

'jShark' will be developed iteratively. After project plan and project design phases each of which has one iteration, the development phase will commence with 2 iterations.

In the project plan phase, the major deliverables will be the Project Feasibility Document [1], Project Vision Document [2], Project Schedule [3] and the Project Development Case Document. The project will be demonstrated after one iteration of the development phase and the final demonstration will be done after the full development and integration.

2.2 Disciplines

The development case covers all disciplines of RUP including the 6 engineering disciplines and the 3 supporting disciplines.

Engineering Disciplines

- Business Modeling

- Requirements

- Analysis and Design

- Implementation

- Test

- Deployment

Supporting Disciplines

- Configuration and Change Management

- Environment
- Project Management

2.3 Discipline Configuration

2.3.1 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Feasibility Study	X						

2.3.1.1 Explanation of the table

Column Name	Purpose	Contents/Comments
Artifacts	Feasibility Study	A feasibility study is carried out to ensure that the project is feasible
How to Use	The decision of whether to do this project or not is based on this study	A feasibility report is a must have at inception phase.

2.3.2 Reports

Reports	How to Use	Templates/Examples	Tools Used
Project Proposal	Propose the project	–	MS Word
Project Feasibility Document	Check the feasibility of the project	–	MS Word
Project Vision Document	State the project goals	RUP Template	MS Word
Project Schedule	Schedule the entire project	–	Open Proj
Project Development Case	Propose the development plan	RUP Template	MS Word Visual Paradigm
Weekly Reports	Provide progress reports / project status	RUP Template	MS Word

3. Disciplines

3.1 Business Modeling

3.1.1 Workflow

Visual Paradigm for UML Community Edition [nc

Propose Project

Conduct Feasibility Study

No

Is Feasible?

Yes

Create Project Vision

Identify Business Actors

Identify Business Use Cases
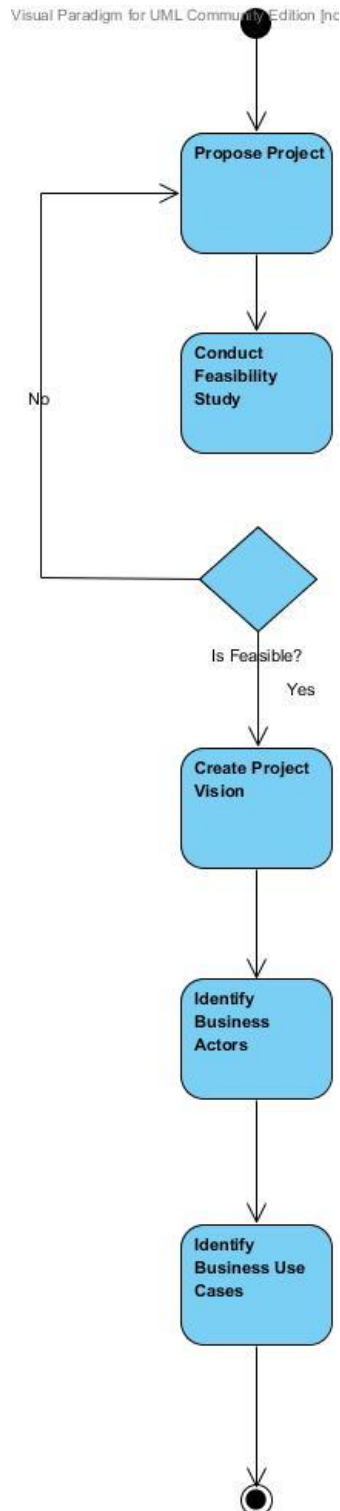
3.1.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Business Actor	X				-	Visual Paradign	-
Business Use Case	X				-	Visual Paradign	-
Business Use-Case Model	X				-	Visual Paradign	-
Business Vision	X				-	Visual Paradign	RUP Template

3.1.3 Reports

Reports	How to use	Tools Used	Templates/Examples
Business Use-Case	Identify business use-cases for jShark	Visual Paradigm	_

3.2 Requirements

3.2.1 Workflow
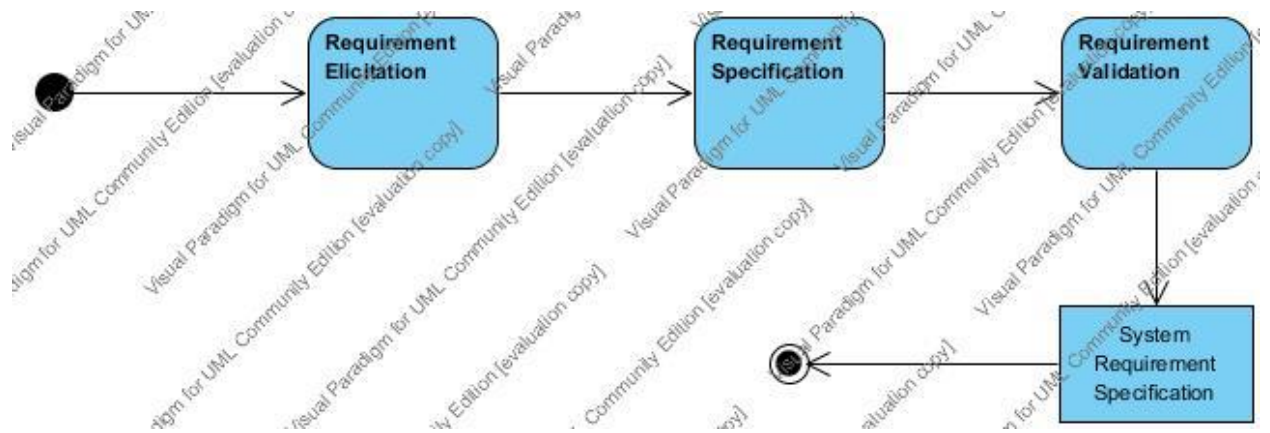
3.2.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Actor	X					Visual Paradigm	
Requirements Management Plan		X				MS Word	
Stakeholder Requests	X					MS Word	
Software Requirements Specification		X				MS Word	RUP Template
Use Case		X				Visual Paradigm	
Use-Case Model		X				Visual Paradigm	
Vision	X					MS Word	RUP Template

3.2.3 Reports

Reports	How to Use	Tools Used	Templates/Examples
Actor	To identify users, systems that interact with the system	Visual Paradigm	-
Use-Case	To identify how each actor interacts with the system	Visual Paradigm	-

3.3 Analysis & Design

3.3.1 Workflow
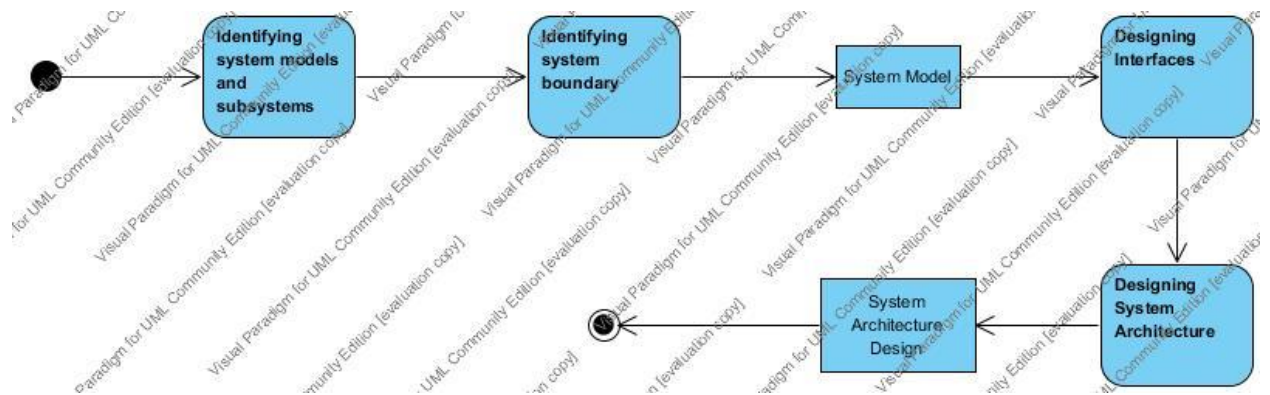
3.3.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Deployment Model		X				Visual Paradigm	
Data Model		X				Visual Paradigm	
Design Class		X				Visual Paradigm	
Design Model		X				Visual Paradigm	
Design Package		X				Visual Paradigm	
Design Subsystem		X				Visual Paradigm	
Event		X	X			Visual Paradigm	
Interface		X	X			Visual Paradigm	
Protocol		X	X			Visual Paradigm	
Reference Architecture		X				Visual Paradigm	
Signal		X	X			Visual Paradigm	
Software Architecture Document		X				MS Word	RUP Template
Use-Case Realization		X	X			Visual Paradigm	

3.3.3 Reports

Reports	How to Use	Tools Used	Templates/Examples
Class	For model driven development	Visual Paradigm	
Design-Model Survey	For model driven development	Visual Paradigm	
Design Package/Subsystem	For model driven development	Visual Paradigm	
Use-Case Realization	To ensure that all requirements are implemented	VMS WOrd	

3.4 Implementation

3.4.1 Workflow
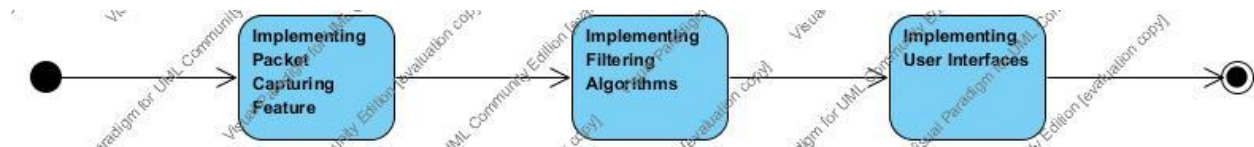
3.4.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Build		X	X	X		IDE's	
Component		X	X	X		IDE's	
Implementation Model		X	X			Visual Paradigm	
Implementation Subsystem		X	X			IDE's	
Integration Build Plan			X	X		MS Word	

3.4.3 Reports

Reports	How to Use	Tools Used	Templates/Examples
Weekly Report	To inform the weekly progress		

3.5 Testing

3.5.1 Workflow
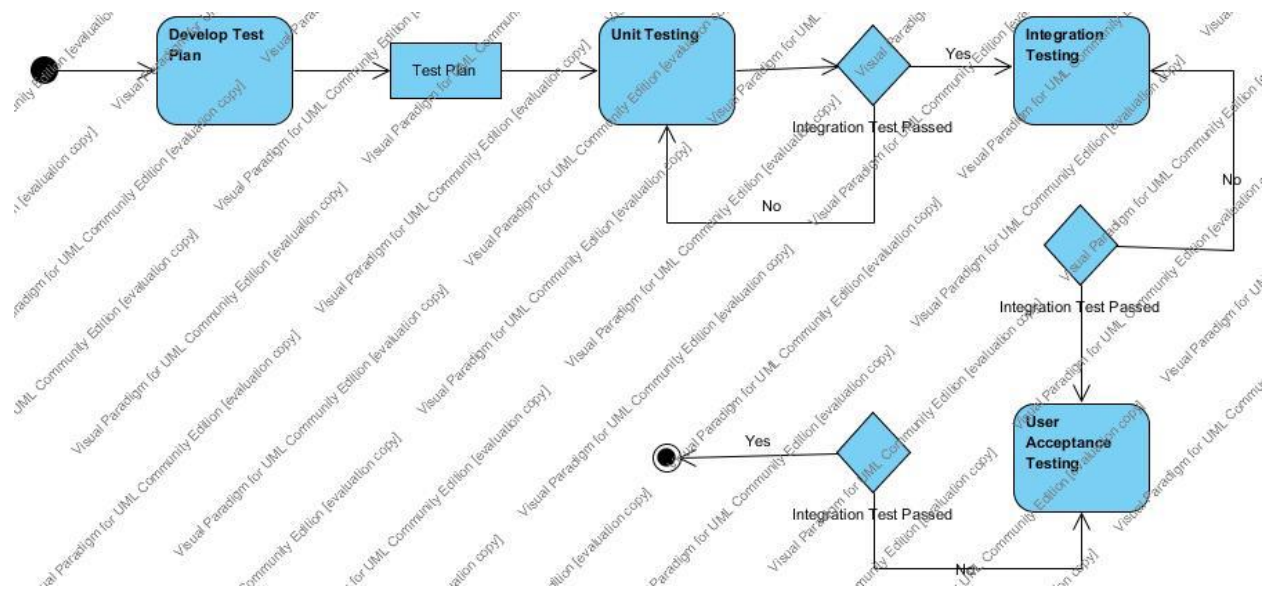
3.5.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Test Case		X	X			IDE's	
Test Class		X	X			IDE's	
Test Components		X	X	X		IDE's	
Test Suite		X	X	X		IDE's	
Test Plan		X	X	X		IDE's	
Test Results		X	X	X		IDE's	

3.5.3 Reports

Reports	How to Use	Tools Used	Templates/Examples
Test Survey	Find out whether the system has passed all tests		

3.6 Deployment

3.6.1 Workflow
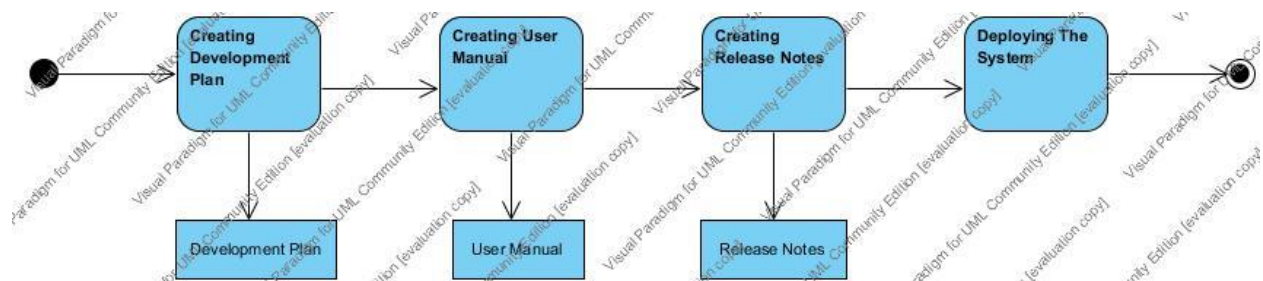
3.6.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Deployment Plan				X		MS Word	
End-User Support Material				X		MS Word	
Installation Artifacts				X			
Product				X			
Release Notes			X	X		MS Word	

3.7 Configuration & Change Management

3.7.1 Workflow
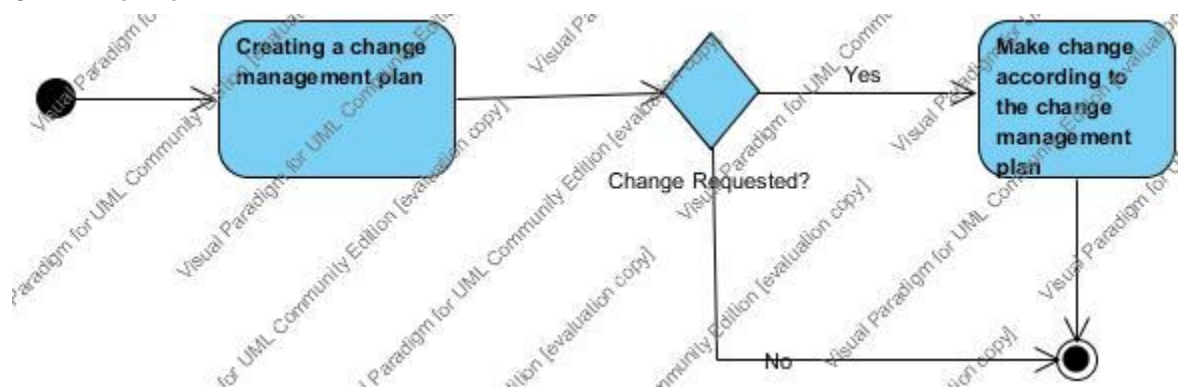
3.7.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Change Request	x	x	x	x			
Configuration Management Plan	x	x	x	X			

3.8 Project Management

3.8.1 Workflow
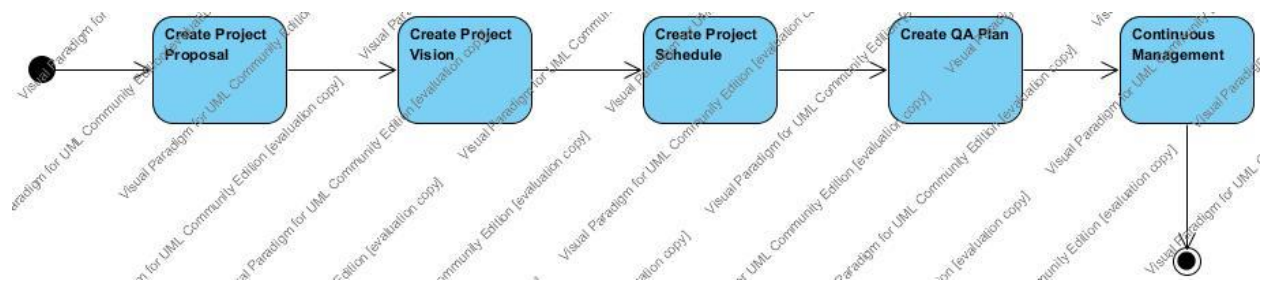
3.8.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Business Case	X						
Iteration Plan	X	X	X				
Quality Assurance Plan		X					
Risk List		X					
Risk Management Plan		X					
Software Development Plan		X					
Work Order	X	X	X	X			

3.9 Environment

3.9.1 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Business Modeling Guidelines	X						
Design Guidelines		X					
Development Case	X						
Development Infrastructure		X					
Development-Organization Assessment		X					
Manual Styleguide				X			
Project-Specific Templates		X					
Programming Guidelines		X					
Test Guidelines		X					
Tools		X					
Tool Guidelines		X					
Use-Case Modeling Guidelines		X					
User-Interface Guidelines		X					