Object-Oriented Analysis and Design

藍芽連線相容性測試系統

HW#2 Use Case

資工碩一 106598039 林亮勳

資工碩一 106598 林照晟

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# Requirement Document

## 1.1 Change History

|  |  |  |
| --- | --- | --- |
| Revision | Description | Date |
| Iteration I | | |
| 1 | Problem statement | May 9, 2018 |
| 2 | System Context Diagram  Summary of System Features  Use Case Diagram  Use Cases  Non-functional Requirements and Constraints  Glossary  Software Environments | May #, 2018 |
| 3 |  |  |

## 1.2 Problem Statement

由於不同作業系統版本的裝置與韌體在藍芽的多重配對測試不僅操作複雜、不易紀錄且會產生大量檢測報告，因此需要一個系統簡化操作流程及整合結果報表，加快測試速度，遂為本系統之開發目的。

本系統將提供給藍芽裝置及韌體的開發人員及測試人員進行裝置與韌體之藍芽配對測試時使用，測試人員將可直接透過網頁選擇裝置版本與韌體，自動化進行配對測試並產生配對結果之整合報表，便於測試人員快速瀏覽測試結果。

　　本系統將使用React.js及Node.js進行前後端網頁撰寫，並建置一網路硬碟儲存測試配對組合之config檔，該硬碟將在接收檔案後發送測試要求至Jenkins上進行測試，完成後回傳測試結果報表，並由原網頁呈現整合後的測試結果。

## 1.3 System Context Diagram

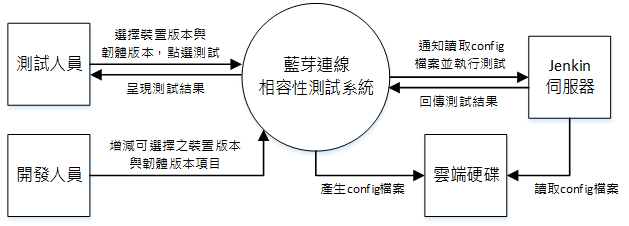
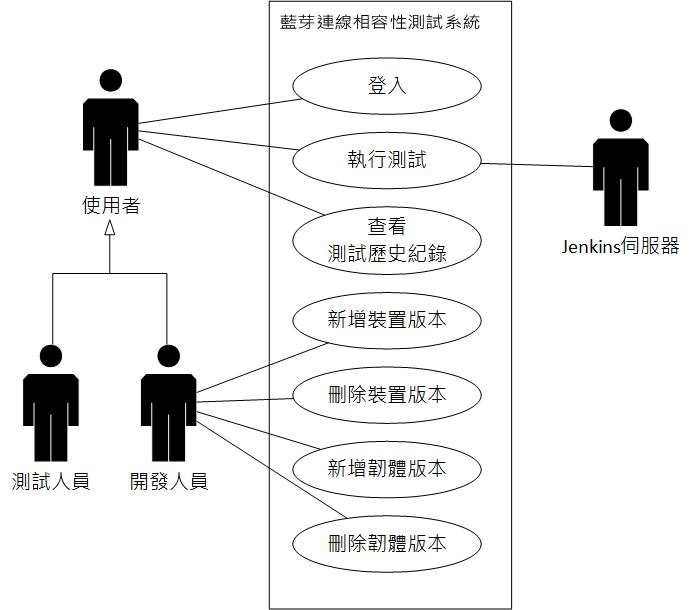


圖1-1 System Context Diagram

## 1.4 Summary of System Features

|  |  |
| --- | --- |
| Feature ID | Feature Description |
| FEA-01 | 提供測試人員網頁系統，可於介面中選擇任意數量之裝置版本及韌體版本，並依所選項目產生config檔至雲端硬碟中。 |
| FEA-02 | 雲端硬碟可通知Jenkins伺服器前來獲取config檔以執行相對應之測試。 |
| FEA-03 | 網頁系統需接收、儲存及管理Jenkins伺服器產生之測試結果。 |
| FEA-04 | 網頁系統需提供一歷史紀錄頁面呈現統整後的測試結果供測試人員瀏覽。 |

## 1.5 Use Case Diagram



## 1.6 Use Cases

|  |  |
| --- | --- |
| Use Case Name | 登入 |
| Scope |  |
| Level |  |
| Primary Actor |  |
| Stakeholders and Interests |  |
| Preconditions |  |
| Success Guarantee |  |
| Main Success Scenario |  |
| Extensions |  |
| Special Requirements |  |
| Technology and Data Variations List |  |
| Frequency of Occurrence |  |
| Miscellaneous |  |
|  |  |

|  |  |
| --- | --- |
| Use Case Name | 執行測試 |
| Scope |  |
| Level |  |
| Primary Actor |  |
| Stakeholders and Interests |  |
| Preconditions |  |
| Success Guarantee |  |
| Main Success Scenario |  |
| Extensions |  |
| Special Requirements |  |
| Technology and Data Variations List |  |
| Frequency of Occurrence |  |
| Miscellaneous |  |
|  |  |

## 1.7 Non-functional Requirements and Constraints

|  |  |  |
| --- | --- | --- |
| NFR ID | Category | Feature Description |
| NFR-01 | Performance | 當網頁產生config檔至雲端硬碟中時，雲端硬碟應立即通知伺服器讀取檔案。 |
| NFR-02 | performance | 從測試人員點選測試至產生結果之間隔不可過久。 |
| NFR-03 | Reliability | 系統必須能夠列出每筆測試的結果，不可遺漏。 |
| NFR-04 | Design constraints | 由於實際測試須透過Jenkin伺服器上已有之測試程式，因此系統產生之config檔格式需配合其程式規格。 |
| NFR-05 | Usability | 系統需列出所有目前可測試之裝置版本、韌體版本，並可輕易選擇配對後點選測試 |

## 1.8 Glossary

|  |  |
| --- | --- |
| Item | Definition or Description |
|  |  |
|  |  |

## 1.9 Software Environments

　　使用Javascript中以物件導向為主之網頁框架React.js，以及用於後端及存取config檔之Node.js。（以及雲端硬碟相關所需技術與語言待列）

2 The Previous Project Information (extra requirement for specific students)

For students whose projects are based on an existing one (please contact the TA if you have any problem on this definition), the following information about the existing project has to be provided.

3.1 Use case diagram (only use case diagram, do not submit use cases)

3.2 Conceptual model (analysis class diagram)

3.3 Design class diagram

3.4 System features that have been developed before this project began.

**Time log（Measurement）**：

|  |  |
| --- | --- |
| 日期 | 時間 |
| 2018/3/16 | 22:00 ~ 24:00 |
|  |  |
|  |  |