Requirements Elicitation

Introduction

Requirement Elicitation is the practice of researching, discovering and gathering the requirements of a system from its users and stakeholders. This is an integral step in the software development lifecycle as it aligns the expectations between the project team and the customer ensuring that the optimal solution is developed. Consequently, this reduces the risk of project failure.

There were two primary methods that were used for requirement elicitation:

1. Document Analysis
2. Interview

Document Analysis

Background documentation was provided by the Australian Clinical Dosimetry Service (ACDS) to serve as the context for this project. The documents provided a brief summary of the project including the aim, context, and notes about factors of equipment used in radiation therapy. In addition, the stakeholders provided ideas for development of the GUI. Our team analyzed the documentation to gain an initial understanding of what the project would entail and conducted background research into dosimetry techniques used by ACDS. Furthermore, we established an understanding of the current Excel-based solution in use by ACDS, and the stakeholders' vision for the user interface of the application.

Interview

For the interview, we wanted to ensure we established a rapport with the ACDS team and clarify our understanding of the project. We aimed to gain an understanding of the different roles and responsibilities of those present at the interview to understand their use cases with the current system. To prepare for the interview, the whole team contributed to a set of questions based on the provided documentation. These questions would allow us to clarify our understanding of the current systems, the clients' vision for this project/upgrade and the current pain points that would need to be addressed. We sought to ask open-ended questions that would promote an unstructured and free-flowing discussion where our interviewer would also ask for clarifications/follow up questions during the conversation to ensure we would understand the larger picture.

The interview was conducted over Zoom to maximize the attendees across the student project team and the external stakeholders and was recorded to serve as a referral point. There were interview roles that were established within the project team to ensure each thread of the conversation was captured and recorded.

Interview Roles/Responsibility

Role	Team Member
Minute Taker	Emaad Beig
Interviewer	Gonzalo Molina
Observer	Ziyu Qian

Questions & Answers

#	Questions	Client Answers
1	What are the two different projects and how do they differ?	• The project may be split up between the two teams as required. • Possibly GUI and Database.
2	Which team will work on what side of the project?	• To be determined by the student teams.

3	What does ACDS do?	• Audit the intensity of radiation equipment across AU and NZ, done via conducting audits. • 50-70 equipment, each with 5-10 calibration factors. • Calibrations are valid for 3 years.
4	How do Audits take place usually?	• 4 levels of audits: hospital staff or ACDS staff conducted depending on the level. • Audits are conducted individually for machines and not for all at once.
5	• How does the spreadsheet get filled in currently? • Do ACDS / Clinics fill out the same fields?	• Each piece of equipment usually has a model and serial number. • Calibration report date logged and outdated data is flagged with an expired tag. • Yellow cells - user filled (to be imported), Green cells - international medical advice (does not need to be adopted into solution). • Columns H:M calibrations for different levels of radiation. • Calibration data is manually entered and reviewed by multiple personnel. Data is either manually copied across spreadsheets or macros are used.
6	Who will be the primary users of the GUI? Do roles need to be put in place to restrict activity?	• All the staff of ACDS will use the application. • All staff can see and use data, only admins can manipulate. Different levels of admin for entering and approving. • Data Approval process implementation required.
7	When creating a new spreadsheet, which fields are updated?	• The old data needs to be copied from the previous spreadsheet to the new one. • Only the data in the yellow cells is edited in the new spreadsheet.
8	Is the structure of the spreadsheet standardized?	• It is standardized for ACDS at the moment, but it is acceptable to make some changes for the exports of our application.
9	What are the expectations of managing previous versions of the spreadsheets?	• No previous data needs to be migrated as various formats have been used in the past • Only the latest version provided will be migrated • Current data will be used as version 0.
10	How will the data be exported?	• The format can be either a csv or spreadsheet. • A new presentation of the data is acceptable and ACDS can adjust the tables they are using currently. • A similar export format as the current is preferred.
11	Other expectations of the solution?	• The client prefers a web app for the solution provided, but open to deliberation. Discuss options over future meetings. • Needs to be safe and secure. • Infrastructure to update equipment calibration data individually or add new equipment.
12.	Can you provide a demo of the current system?	• A brief demonstration was provided.