



UNIVERSIDAD DE GUADALAJARA

CENTRO UNIVERSITARIO DE LOS VALLES

Project Change Requests Control

System for the Inspection of a Photovoltaic Park with Aerial Images in High Definition and Thermal

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CRC-SIPaF-V0.1

September 20, 2022

Ameca, Jalisco

Proposed Change Requests

| Change Request ID | Requestor | Date | Status |
|-------------------|-------------------------|------------|-----------|
| CR-01 | Omar Ali Zatarain Durán | 09/09/2022 | Analyzing |

Authorized Change Requests

| Change Request ID | Owner | Date | Status |
|-------------------|-------|------|--------|
| | | | |

About this document

This document has all the requested changes of this project, as well as the policies for the implementation of a change request. Whether they have been approved or not, with the analysis and decision form. Here is where we can see why the project was approved or rejected. Each change request will have their change request ID, who requested it, the change request items, the description of the impact on every area with a SWOT table and the final decision explained.

Policies

All system application changes regarding the baseline of the project should meet the next policies to ensure a correct control process for the changes proposed. They must be reviewed, authorized, tested, implemented and released base on the software configuration management plan.

1. The current baseline configuration of the system and its components shall be developed, documented and up to date.
2. Changes to the baseline should be authorized, documented and controlled by the use of a formal change control procedure.
3. The format for the proposed change request must be a detailed document explaining the change to the system, the reason for such change and who is asking for it.
4. The project owner must acknowledge the change request and document it in the change request document.
5. The project owner should share with all the members of the committee change board the change request.
6. The sum of the change request must not exceed 4 weeks of extra time for the project.
7. Every person on the committee board members should expose
8. Project owner should briefly present the CR at the beginning of the meeting with the committee board.
9. The members should make their own analysis, on a SWOT matrix based on their expertise and recommendations.
10. Only two people (1 researcher and a 1 developer) can be incorporated on the project.
11. The committee will vote about their approval or disapproval position regarding the CR, in case there is a tie in the votes, only the CEO can take the final decision.
12. The CEO must provide the rationale for the approval and disapproval of the CR.
13. The project owner should implement only the approved CRs.
14. If the require budget to implement a CR is greater than 10%, the client should pay the CR charge in order to fully approve the CR.
15. The CR must have a final decision in a maximum of no more than 3 days.

CR Priorities Manifest

This is the part in which a standard for choosing the CRs that must be prioritized is going to be detailed. There would be a table created to determine which CRs can be implemented by getting the better scores.

- A. The CRs with less risks are going to be prioritized first.
- B. The CRs with more strengths are going to be prioritized first.
- C. CRs with more strengths than risks are going to be prioritized first.
- D. CRs without strengths or opportunities should be ranked after those who contain strengths and opportunities.
- E. For the qualitative part, a number of importance for the total of the strengths and opportunities should be given between 1 and 3 to have a normalized factor and the number should be considered as negative.
- F. For the qualitative part, a number of importance for the total of the weaknesses and threats should be given between 1 and 3 to have a normalized factor.
- G. The CR that implies using less of the budget money; the normalized factor number should be the budget percentage times 3.
- H. The CR that has less days of implementation; the normalized factor number should be the CIs times 2.
- I. Beneficial factor added to the software in order to give a product with more capabilities to the client than the one already designed from minus 1 to minus 10 with minus 10 representing a beneficial change and to normalized it should be multiplied by 3.
- J. The number of persons needed; this would be multiplied by 5 to normalize the factor.
- K. The CR priority score with the lowest number should be considered as a priority.

Change Request-01

| | | | |
|-------------------|------------|-----------------|-------------------------|
| Change Request ID | CR-01 | Requestor | Omar Ali Zatarain Durán |
| Date | 09/09/2022 | Project Manager | Raúl Rubén Romero López |

Describe the Requested Change

Make the system analyze by sets the information gathered to have several orthomosaics and then perform a whole orthomosaic.

Describe the Reason for the Request

Sometimes there would not be enough time or necessity to make the whole analysis in the photovoltaic plant, but whenever an orthomosaic is made, it should be able to merge with another orthomosaic created that is located in the same place.

| INTERNAL FACTORS | |
|--|---|
| STRENGTHS (+) | WEAKNESSES (-) |
| <ol style="list-style-type: none"> 1. A clearer overview for the user over each section. 2. Help separate the area of interest by sectors and display the information obtained. 3. Make a faster process since different CPUs can make develop the process. | <ol style="list-style-type: none"> 1. The software will take more time to perform a whole project. 2. Have more parameters into consideration to perform the process. 3. The machine should have more power consumption. |

| EXTERNAL FACTORS | |
|--|--|
| OPPORTUNITIES (+) | THREATS (-) |
| <ol style="list-style-type: none"> 1. Have a software that can perform the analysis in different days and have a final product at the end that can be more attractive. 2. Give a preview of a sector in less time that it will take to perform the whole orthomosaic. 3. Include a template for a project in each area. | <ol style="list-style-type: none"> 1. The maintenance of the code will be harder to modify. 2. Tests will take more time to complete to assure quality, so we will need a 10% of the budget (\$35,000.00). 3. Time required is expensive the rule we should not exceed 1 month. 4. One more person should be hired because the team already has their own tasks assigned and will not have time to address the CR. |

Risk Identification/Analysis

There are very good strengths added to the project that will make a more commercial and faster product. There are also great opportunities that will position the application as one with some specialized skills. As in weaknesses, there would be some extra time and expertise needed to learn how to use in full potential the software with the new CR. Also, the point that the maintenance, the tests, the money needed and another person needed to attend this request must put in the limit the risk of failure and should it be implemented, there must be a good control on this request.

| Impact Analysis | |
|---|----------------|
| Configuration Items to be Modified | Version Number |
| 1. Code | V 1.0 |
| 2. SRS document | V 1.2 |
| 3. Tests | V 0.3 |
| 4. Schedule | N/A |
| 5. Budget | N/A |
| Describe the impact of the suggested change to work that is already complete. | |

| CR Priority Score | | | | | | | |
|---|----------|---------------|---------------------------|----------------------|-------------------|----------------|----------------|
| Budget % | CI Items | Days required | Strengths & Opportunities | Weaknesses & threads | Beneficial factor | Extra Personal | Priority Score |
| 10*(3) | 5*(2) | 21 | -6*(2) | 7*(3) | -7*(3) | 1*(5) | 54 |
| The numbers between parentheses are the ones considered as factors to normalize the parameters. The priority score indicates a number of priority between the CRs. The CR with the highest level of priority is the one with the smallest priority score . | | | | | | | |

| Budget Impact | | | |
|-------------------------------|------------------|-------------------------|----------------------|
| New Deliverables Description | Pay description | Cost of New Deliverable | Percentage of budget |
| 1. Make smaller orthomosaics. | Pay programmers. | \$20000 | %5.7 |
| 2. Modify the tests made. | Redo tests. | \$15000 | %4.3 |
| Total cost is \$35,000, | | | |

| Decision |
|---|
| <input type="checkbox"/> Approved <input type="checkbox"/> Rejected |
| <input type="checkbox"/> Approved with modifications |
| Comments |
| |

Approver's Printed Name

Date

Title

Signature