

Change Request Form

Project:	<i>Design and implementation of a software for the mental control of terrestrial robots with therapeutic purposes</i>	Change ID:	<i>CR-02</i>
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Change Request			
Change Title:	<i>New therapeutic exercise</i>	Identification Date:	<i>07/10/2022</i>
Requested by:	<i>Dr. Omar Ali Zatarain Durán</i>	Category:	<i>Functional requirement</i>
Priority:	<input type="checkbox"/> Very High <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/> Very Low		

Change Description & Details

The client requests a new therapeutic exercise consisting of developing fine tune movements through a glove with movement sensor, once the user achieves the desired fine skill, the robot performs a movement as expected by the user.

Current Situation:

The system only works with an EEG input.

Desired Situation:

Client wants to select the type of input for move the robot, it can be EEG, it can be a glove or an EEG.

Configuration items:

Software CI

- 1- *Code*
Is necessary add a new module that can obtain information of the glove and send it to the robot
- 2- *Data base*
Is necessary modify actual data base design and add new exercises and one new input device
- 3- *Inputs of the system*
Is necessary develop a new module for management the input information from the glove
- 4- *Interface design*
Is necessary add a new window to the interface refers to the new functionality

Hardware CI

- 5- *Glove*
Current we don't have a necessary glove, so we need obtain one and developers need study it
- 6- *Sensors*
We don't have sensors, so we need to buy sensors and developers need to study it

Documentation CI

- 7- *Requirements*
Is necessary add new requirements referring to the new CR
- 8- *Design of system*
Diagrams must be updated

Impact or Risks:

Impact and risks are described in the following section called "Analysis of Risks"

Analysis Of Risks

Roles:

- *Project owner:* Dr. Antonio Cervantes Alvarez
- *Project manager:* Dr. Antonio Cervantes Alvarez
- *Lawyer:* University of Guadalajara (Dr. Rodolfo Omar Dominguez García)
- *Financial manager:* University of Guadalajara (Dr. Rodolfo Omar Dominguez García)
- *Quality editor:* Dr. Antonio Cervantes Alvarez
- *Human resources representative:* Ilse Aribel Hernández Meza

Issues matrix

ISSUES	Minimal	Regular	Urgent	Critical	Low Risk	Medium Risk	High Risk
TIME							
BUDGET (\$200,000)		50%					
HR							
QA							
MANDATORY LAW							

Budget

Budget is considered as critical by following reasons:

- 1- Budget is compromised by 40% because is necessary to buy the technology such the glove
- 2- It will exceed the estimated time, and must pay extra time for developers
- 3- is necessary to employ new people and pay them

Time

Time is critical because the time for project is limited and project only have one programmer assigned and the programmer needs to investigate, develop, and test the system and the current change request and changes may delay the hole project at least 6 more months.

Human resources

Is considered as critical because we don't have people to make the change request and is necessary at least one expert therapist on fine therapy.

Is necessary to employ new programmers for the new change request.

Quality administration

Quality administration is a critical risk because remaining time is 9 months, and it is not enough for develop initial requirements and current change request.

Is not available more money for project until 2023 and the amount is unknown

Mandatory law

Main law is to finish whole project in before May 2023, so is impossible change delivery date.

SWOT Analysis

Strengths	Weaknesses
It is possible reuse the code for moving the robot It has a therapist expert that can support in the therapy design	The time, budget and personal allocated to development are not enough for training and developing the change request
Threats	Opportunities
Current programmer cannot dedicate herself full time to the development of the project, needs investigate the subject. Current developer is not sufficient for develop hole CR	Systems will have more functionalities and can be offered more than one kind of therapy not only for ADHD treatment and in case of failures in the EEG the Glove input could be used