Change Request Form

Project:	Design and implementation of a software for the mental control of terrestrial robots with therapeutic purposes	Change ID:	CR-02

Change Request			
Change Title:	New therapeutic exercise	**Identification Date:**	07/10/2022
Requested by:	Dr. Omar Ali Zatarain Durán	**Category:**	Functional requirement
Priority:	☐ Very High ☒ High ☐ Medium ☐ Low ☐ 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 refers to the new CR
8- Design of system
   Diagrams must be updated

Other

9- *Budget*
   Is necessary enough money for purchase the necessary software and the courses or tools to used sensors, glove and add it to the system
10- *Time*
   Is necessary at least 6 more months for develop and document it
11- *Developers*
   Is necessary employ new developers and train them

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 Aribei Hernández Meza

Issues matrix

ISSUES	Minimal	Regular	Urgent	Critical
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 ANALIZYS

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 development the change request

Threats	Opportunities
Current programmer cannot dedicate herself full time to the development of the project, neds investigate the subject. Current developer is not sufficient for develop hole CR	Systems will have more functionalities and can be offer 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