Nielsen heuristics

**Visibility of system status**:   
The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

**User control and freedom**:  
Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

**Consistency and standards**:  
Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

**Error prevention**:  
Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

**Recognition rather than recall**:  
Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

**Flexibility and efficiency of use**:  
Accelerators—unseen by the novice user—may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

**Aesthetic and minimalist design**:  
Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

**Help users recognize, diagnose, and recover from errors**:  
Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

**Help and documentation**:  
Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

System Requirement Categories

## INTERFACES

User Interface – Nielsen Heuristics

Hardware: Use of MCF 5213; Use of Windows PC for application, control & debug; use of specific hardware (AD5292, I2CtoSPIBridge, Analog Muxes, )

Software: Use of Netburner Libraries & Eclipse IDE, specific components’ libraries.

Communications: connections (I2C, SPI, USB for connection, Serial bus for Debug) and the one in charge of each communication.

FUNCTIONAL –

Already defined by user

NOT FUNCTIONAL

Efficiency: time and other limits to the system

Security: not applied to this system

Reliability: not yet defined

Unavailability: time accepted for the system being unavailable.

Maintenance: what and when to perform maintenance stuff.