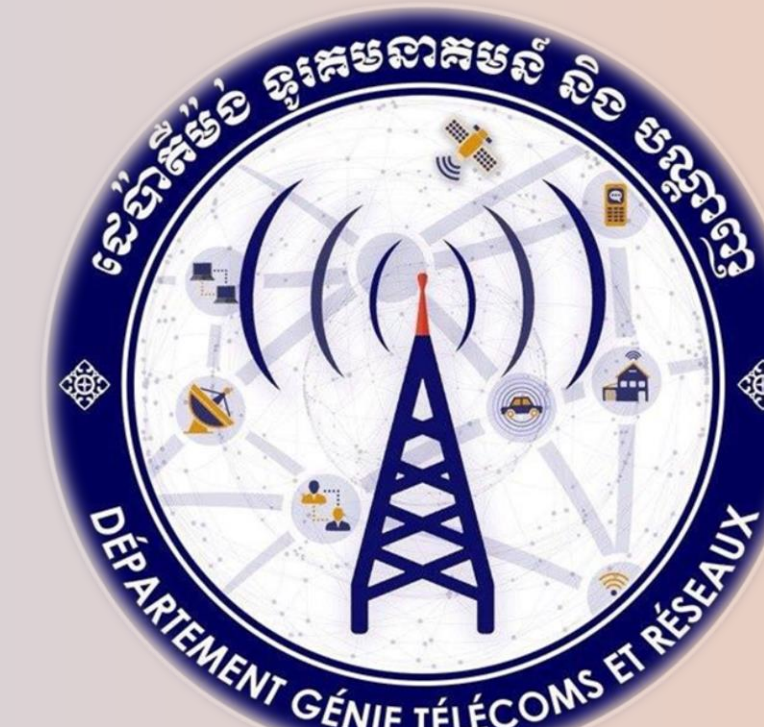




Smart HMI Controller for Agricultural Application



INTRODUCTION

Human Machine Interface (HMI) is useful for user/farmer to control and monitor the smart farming system. It is the interface between user and control/monitoring system in the greenhouse or farm. The farmers can check and regulated the amount of water, temperature, soil moisture and other parameters via this HMI

ARCHITECTURE

The HMI is designed software with a nextion editor that provides software for viewing temperature, humidity, fan, water, and motors in the order of each device screen. In the HMI there are 8 screens, each screen has a design button and the value of max, min Click to see the data of the device in the greenhouse. In greenhouse, HMI is connected with devices such as temperature, humidity, Fan, water , Heater, Solar, Soil moisture,

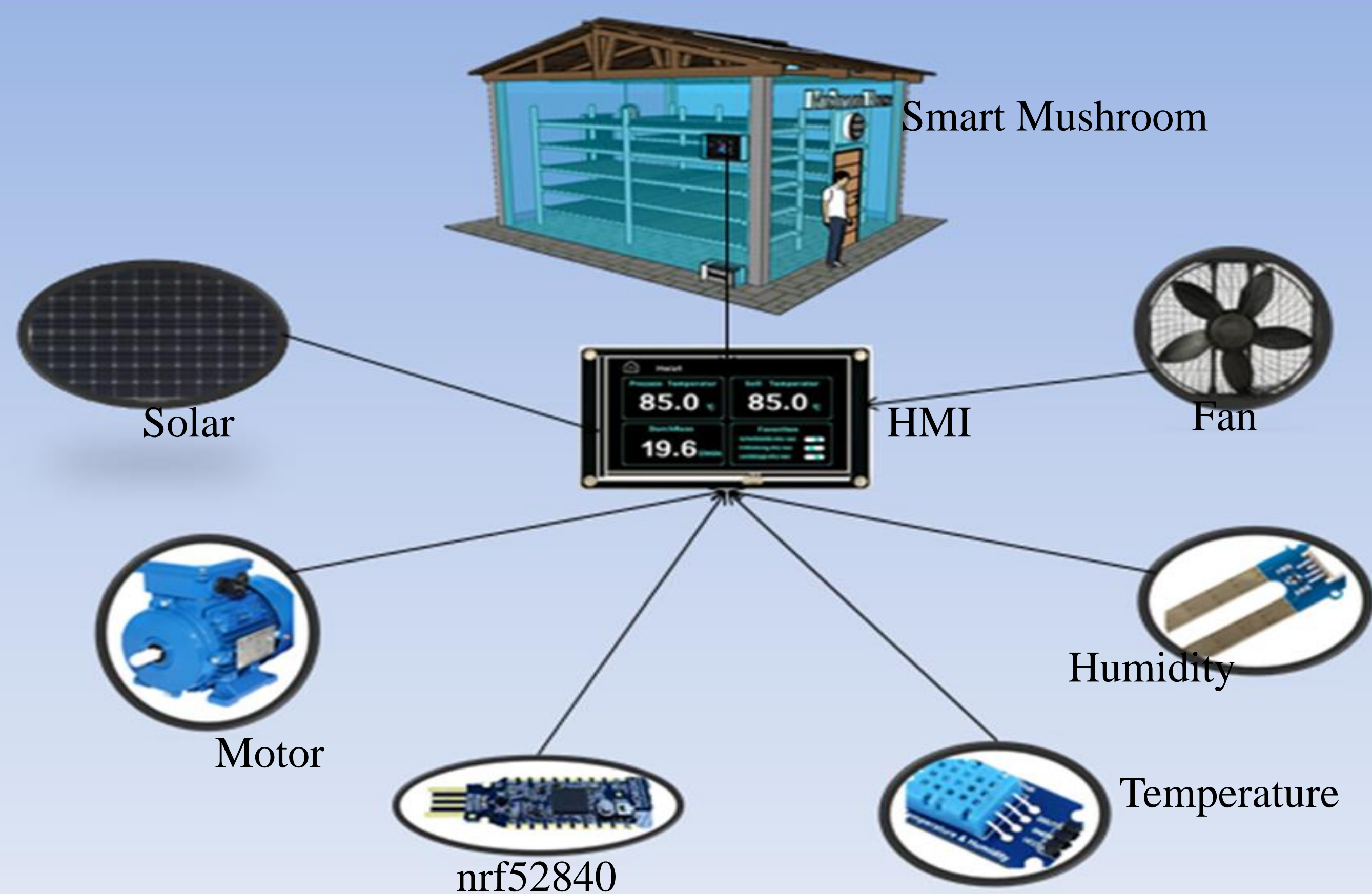


Fig.2 Smart mushroom

Application

HMI is widely using :

- ✓ In Car
- ✓ Controller in factory
- ✓ Hospital
- ✓ Company
- ✓ Coffee shop
- ✓ Framer



Fig.3 HMI User

OBJECTIVES

In this project, the interface of HMI is designed to run on a nx8048k050 touch screen and connected with smart farm control system. It allows users to input the desired value of parameters such as temperature and humidity to the system. It can also display the parameter on the screen as well.



Fig.1 view data

PROCESSING

Arduino is used to integrating software into nrf52840 and HMI. nrf52840 Used to receive data and input that data to the device. The device also provides feedback for checking the temperature, soil moisture, and weather in the crop to the HMI. HMI is a system that can control and stop all systems. To get all the data into the HMI, connect the HMI with nrf52840, a sensor that pulls the data contained in the smart mushroom sponsor into the HMI screen.

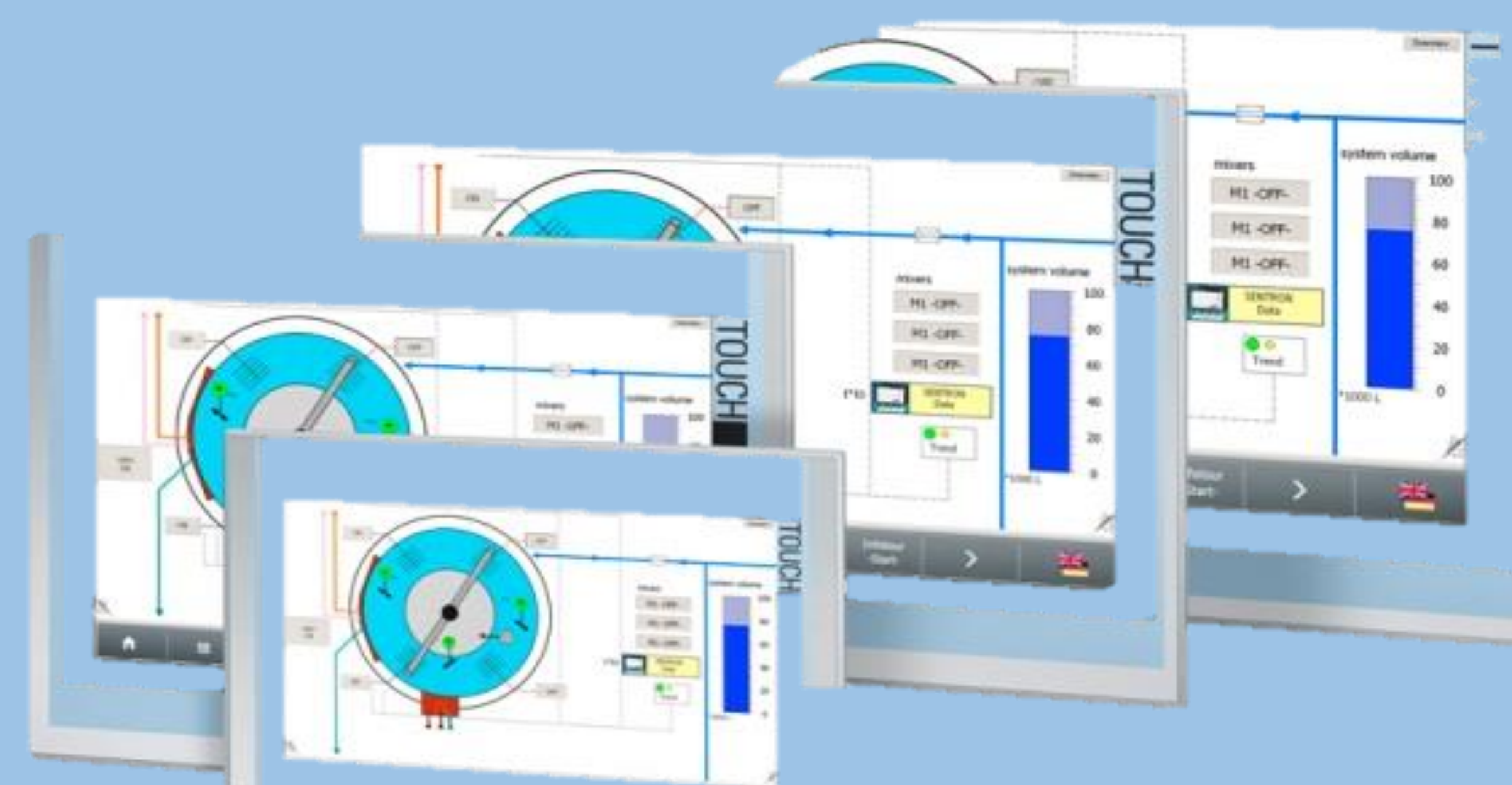


Fig.4 Smart HMI

CONTACT

MANTORS : HEL Chanthan
TBP Sovichea
STUDENT : BIN Chanthy
EMAIL : chanthybin3@gmail.com