Home Automation Systems

Idea

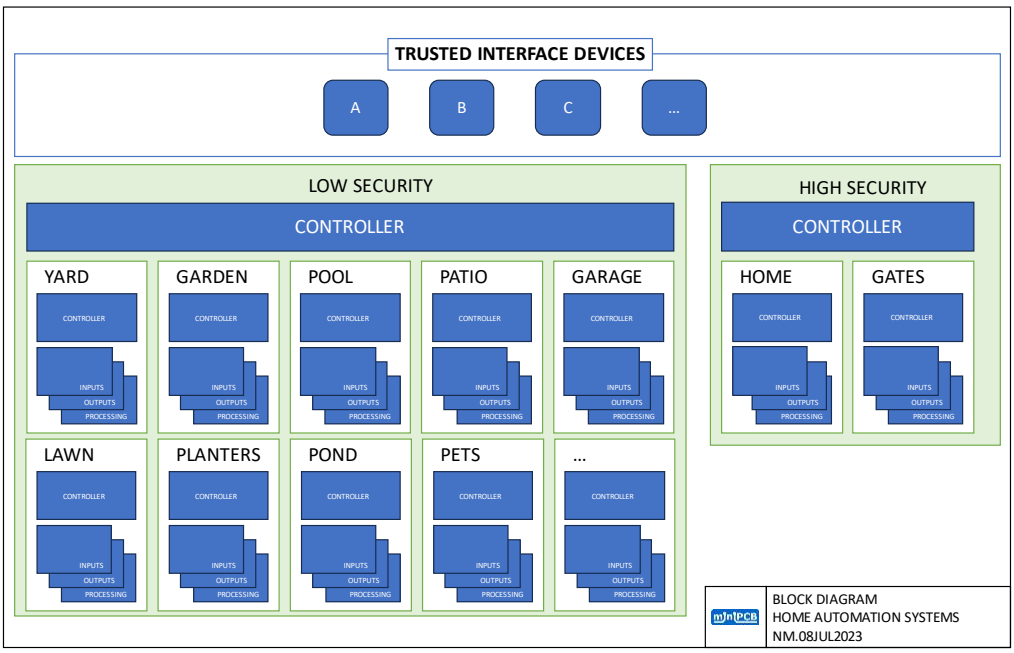
In the inevitable future, home maintenance and improvement stores will begin selling home automation systems and all the devices, tools and hardware needed to modify and maintain them. At least we will see an extra shelf section next to the RJ11 / RJ45 products. It feels like a consumer market that is about to "come online" at stores near us.

In the physical world, home automation systems will always be a series of nested systems with standard device interfaces. Most likely there will be a separate network for higher security systems.

In 2013 I was excited by the idea of a "Smartgadget" that ran apps downloaded from an "App Store". Like an Arduino with no programming cable. I was envisioning a simple, easy to use, highly adaptable home automation system. Today, I envision a more complex system where the "App" is downloaded from an "App Store" transferred to the main controller, transferred to the next controller, etc., until finally arriving at the target processor: where the "App" is programmed/installed/configured/…/used. Now abstract that.

The smartphone app is a marketplace gateway for an AI enabled ecosystem. We can put a black box in our garage that controls our sprinklers and buys data from the system next door because the home owner doesn't want to buy additional sensors, etc. Black boxes buying and selling [objects of knowledge], with approval being the only human inputs. Also, imagine a home automation system app that helps you manage your home maintenance service providers. Of course, no money gets spent unless you click [approve], but money will be spent though an AI capable commerce channel. Imagine the economic possibilities.

In the future, will I be able to sell "AI enabled CAD tool outputs" through "AI capable commerce channel"?



Products on the shelves will be:

- Devices to enable the network
  - RJ11, RJ45, wire, routers, multiplexers, etc.
  - Boxes, panels, conduits, connections, etc.
- Devices to connect to the network
  - Controllers, inputs, outputs, processors, interfaces, etc.
- Tools to modify and maintain the network
  - RJ11, RJ45, etc.
- Tools to install and service connected devices
  - Application specific tools and testers

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The networks formed by the devices will be clustered around home-life solutions. Perhaps describable like this:

1. YARD
    1.1. LIGHTING
    1.2. PREMISES MONITORING
    1.3. CLIMATE MONITORING
2. LAWN
    2.1. WATERING
    2.2. FERTILIZING
    2.3. MOWING
3. GARDEN
    3.1. CLIMATE CONTROLLING
    3.2. NURTIRIENT CONTROLLING
    3.3. WATERING
    3.4. INSECT CONTROL
4. POOL
    4.1. FILLING
    4.2. PUMP
    4.3. FILTER
    4.4. SENSOR
    4.5. CONDITIONER
5. POND
    5.1. FILLING
    5.2. PUMP
    5.3. FILTER
    5.4. SENSOR
6. FOUNTAIN
    6.1. PUMP
    6.2. FILTER
    6.3. SENSOR
7. PATIO
    7.1. LIGHTING
    7.2. FAN
8. PLANT
    8.1. WATERING
    8.2. NUTRIENT MONITORING
9. PET UTILITY
    9.1. FOOD
    9.2. HEALTH
    9.3. PLAY
    9.4. WASTE
10. GARAGE
    10.1. ACCESS CONTROL
    10.2. PREMISES MONITORING
    10.3. LIGHTING
    10.4. BACKUP POWER
    10.5. SOLAR POWER
    10.6. VEHICLE CHARGING
    10.7. VEHICLE MONITORING
11. SHED
    11.1. ACCESS CONTROL
    11.2. PREMISES MONITORING
    11.3. LIGHTING
12. HOME
    12.1. ACCESS CONTROL
    12.2. PREMISES MONITORING
    12.3. SECURITY
    12.4. SAFETY
    12.5. ENERGY MONITORING
    12.6. WATER TREATMENT
    12.7. HVAC
    12.8. APPLIANCES
    12.9. LIGHTING
    12.10. ENTERTAINMENT
13. FARM
    13.1. EQUIPMENT MONITORING
    13.2. CLIMATE MONITORING
    13.3. IRRIGATION

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Can we make a simple-task simpler, by adding extreme complexity? Does it make sense?

Can we develop an AI enabled engineering setup to rapidly innovate in this area? Find the wealth wave.

What is inevitable development work? What can I do?

How can I prepare myself to do that [inevitable work] more efficiently when I get an AI enabled CAD?

How much value can one highly ambitious engineer create during my lifetime?

With AI enabled CAD, how far can I go with the miniPCB brand?

1. Sweep through hundreds of fundamental, classic, and creative circuits?
2. Sweep through dozens of instruments, tools, and toys?
3. Sweep through … a building automation system product space?

Continuing with EAGLE 9 may preclude many AI enabled CAD tools.

I might need to continue to struggle with EAGLE 6.

Is KiCAD a good CAD tool for making the transition to being AI enabled?

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Revision History

REV	DESCRIPTION	ECO	DATE
A	Initial Release	N/A	08JUL2023