# Future Direction

The future plans for the HVAC Model Designer are to design a house, set the wall properties, simulate heat flow and auto-generate a ventilation system.

## House Design

The house designer is mostly complete. Being able to set ceilings, sky lights, windows and floors for rooms would be a nice addition.

## Wall Properties

The wall properties are somewhat working. AJ’s button opens the wall properties but modifying them doesn’t currently set properties for any of the walls. Putting that into its own editor and allowing the user to select a wall and set the wall properties will complete the planned direction for wall properties.

## Simulator

The simulator is working except it doesn’t use wall properties. It uses a constant wall transfer rate. After wall properties are completed, a heat transfer rate for every wall needs calculated and used in the simulation.

Using the physical set location for the building to produce an accurate environment in the simulation. For example, location can define heat, humidity, amount of light source and elevation.

Having a 3D version of the simulator that shows heat propagation in and between floors.

Add VR support so you can walk through the house and extreme experimental technology that allows you to feel the heat of the room.

## Generating Ventilation

You can place vents but the whole goal of this project is to have the system auto-generate the best possible vent system while allowing the user to also edit it.

Showing ventilation piping in the 3D view.

## Code base

Switch from Javascript to Typescript and use WebAssembly compiled code for native simulation speeds.