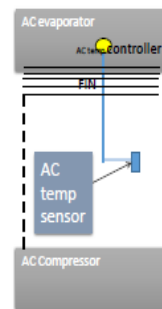
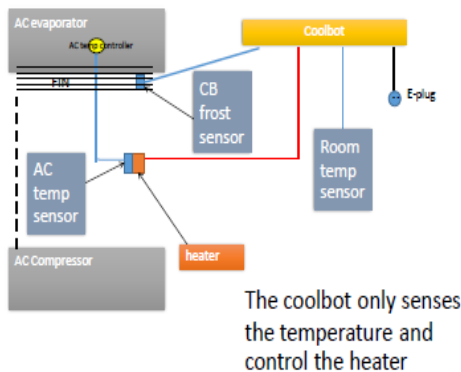


- Experiences with the Coolbot

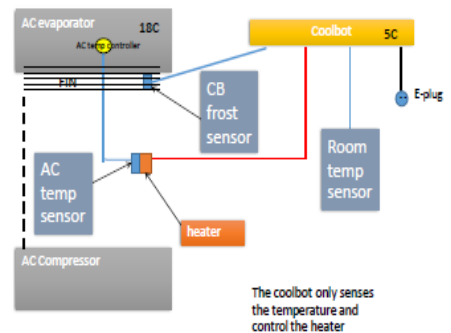
- The idea is to use the home air-conditioner unit instead of the regular cold room unit
- Five times cheaper for the cooling unit cost
- Not the room cost
- Not the energy cost



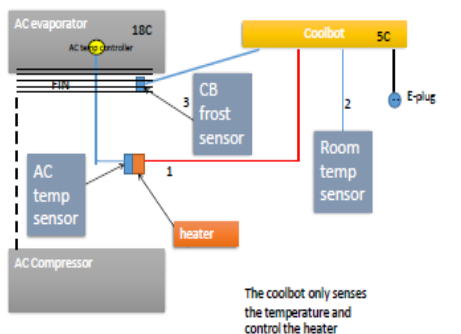
Coolbot diagram



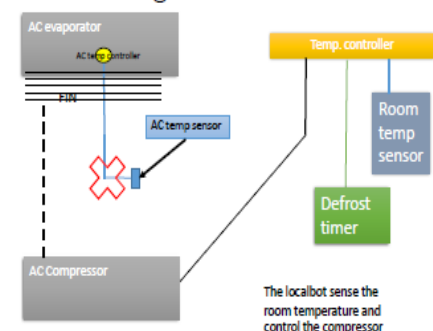
Coolbot diagram



Coolbot diagram



Localbot diagram



Comparing:  
Coolbot room (A) and localbot room (B)



Cool room inside view



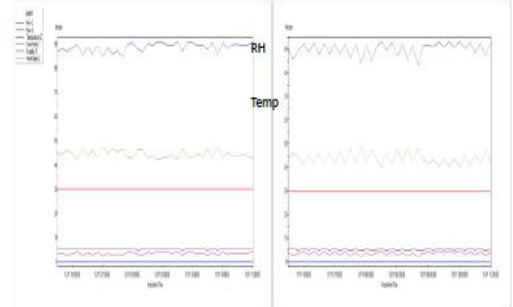
Cool room with Coolbot (A) and cool room with local modification (B)

Cool room controller



Controller costs US \$300 in both cases

Coolbot vs localbot



Coolbot room (A) and localbot room (B)

1. Coolbot is easier to use, not more expensive
2. Installation of the AC unit is very important

The evaporator of AC is smaller than that of the cold room



The temperature of AC evaporator is colder than  
temperature of regular cold room evaporator  
More water condensed and moved out (14%)  
3. Need to add moisture or using plastic bag



KU Postharvest lab



Work well but the insulation is expensive



Test insulation:  
Styrofoam & fiber glass



4. Styrofoam and fiber glass insulation  
is not enough for long term use

Nakhon Si-thammarat  
Community Enterprise

Rambutan and  
mangosteen  
grower group



One inch polyurethane  
Insulation panel



One inch polyurethane insulation



Poor door insulation



Too small AC

No floor insulation

5. Electricity was not stable

6. Cable was too small

Work on insulation is needed to get affordable cold room



Knock down cool room

Chanthaburi Horticultural Research Center



Being tested now







Parts after knocked down

Acknowledgement:

- HortCRSP
- Kasetsart University
- Nakhon Si-Thammarat Community Enterprise
- Chanthaburi Horticultural Research Center

We are  
Fresh!!!

