

# Concept Generation & Selection

EML 455IC – Senior Design – Fall 2011



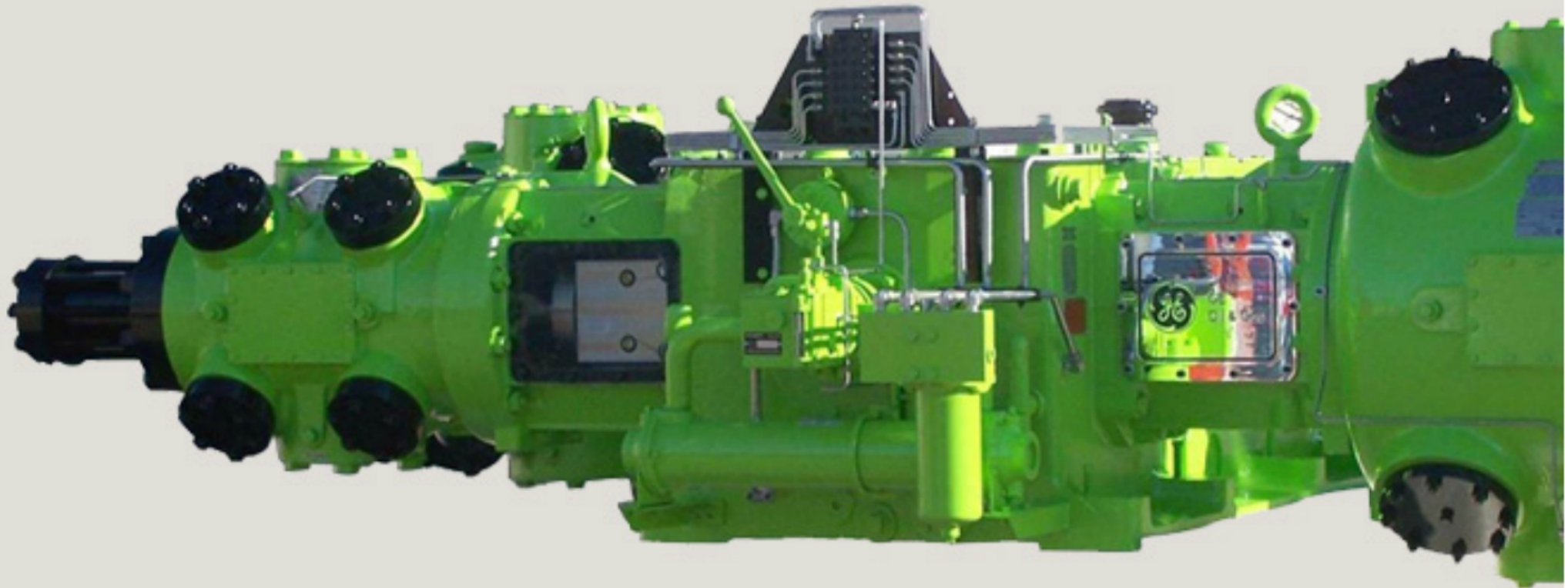
Team # 19  
Jordan Berke  
Dustin McRae  
Khristofer Thomas  
Luis Bonilla  
Trevor Hubbard

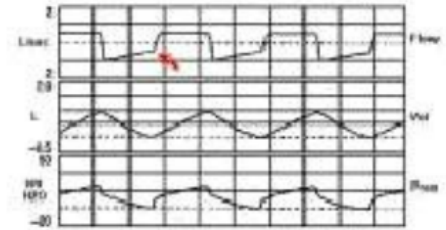
Google Mobile App for Compressor Performance (GE)  
**Department of Mechanical Engineering, Florida State  
University, Tallahassee, FL**

Project Advisors:

Todd Hopwood  
Industry Advisor, GE  
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Engineering  
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Department of Electrical and Computer  
Engineering

# Project Statement





Imagination at work

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7  
GE Title or job number  
9/1/2011



# Ultrasonic Transducer



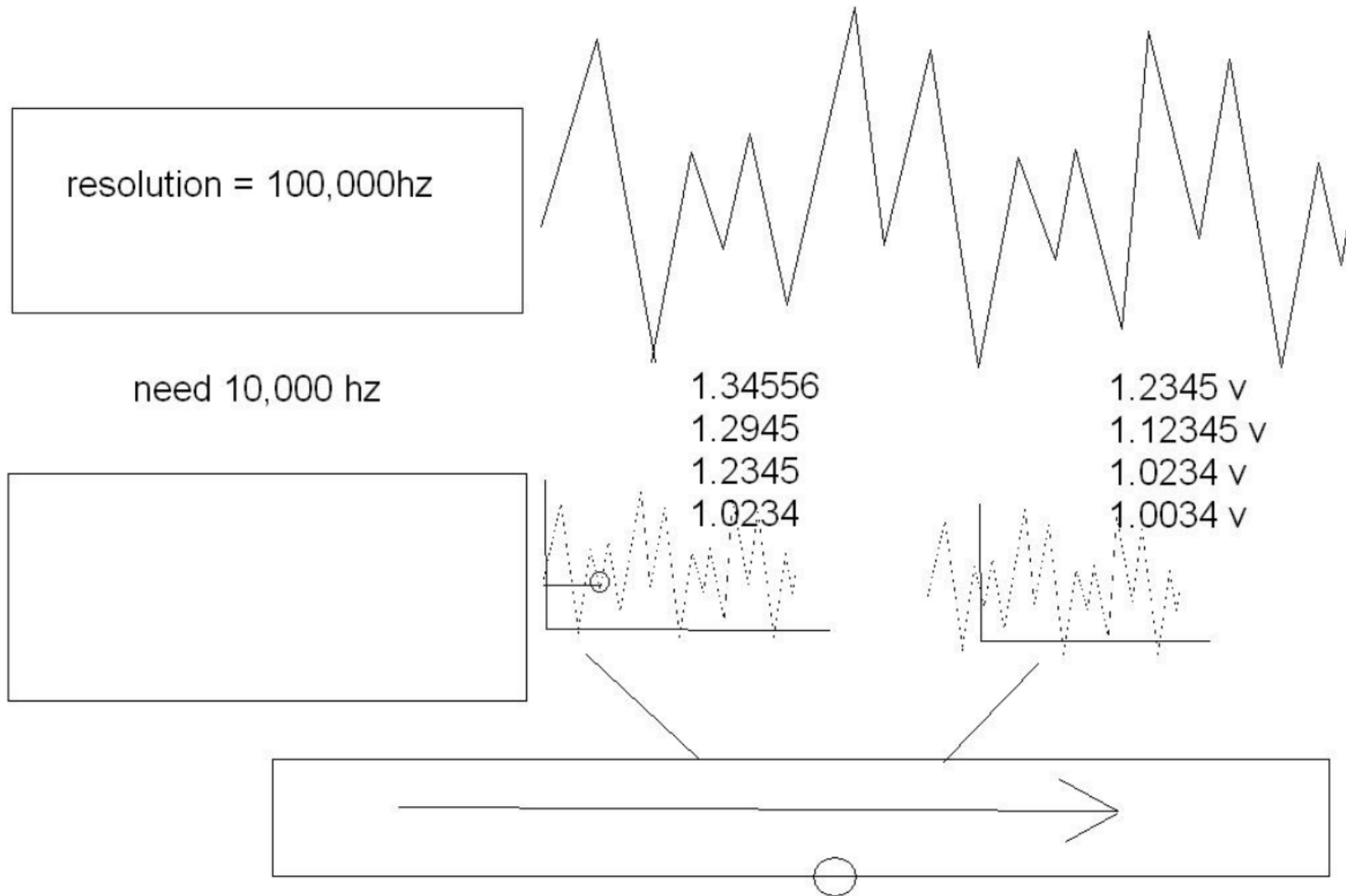
# PT878GC



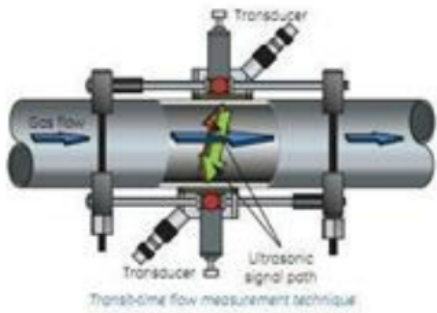
# Custom Method



# Method

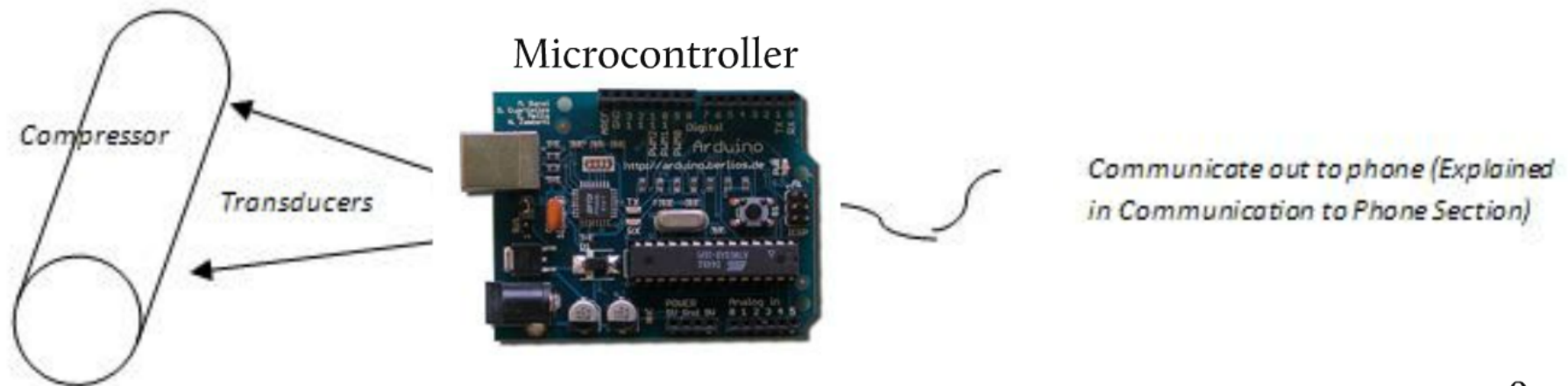
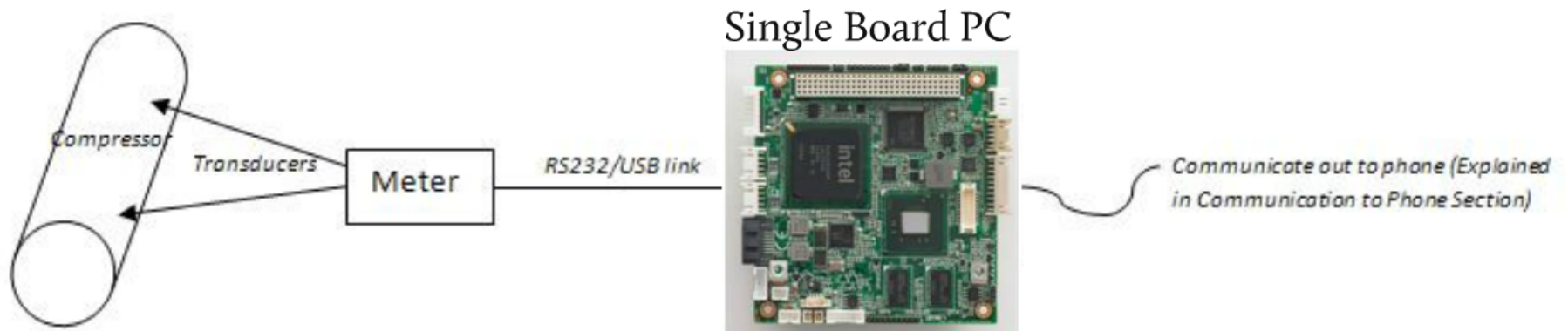


# Pros & Cons



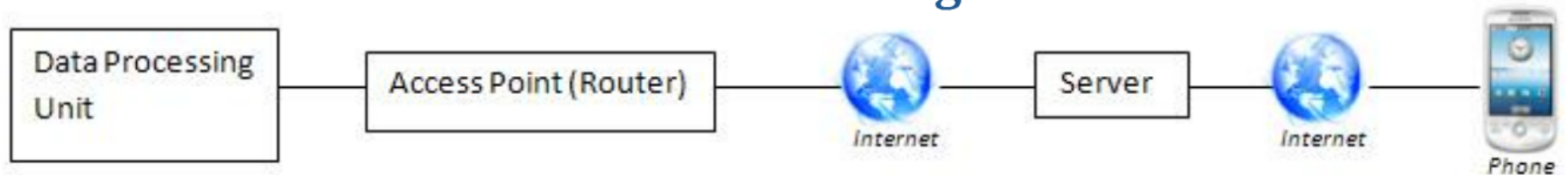


# Data Processing Unit Selection

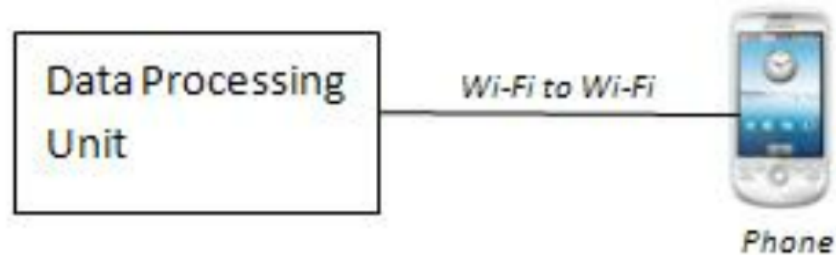


# Communication To Phone

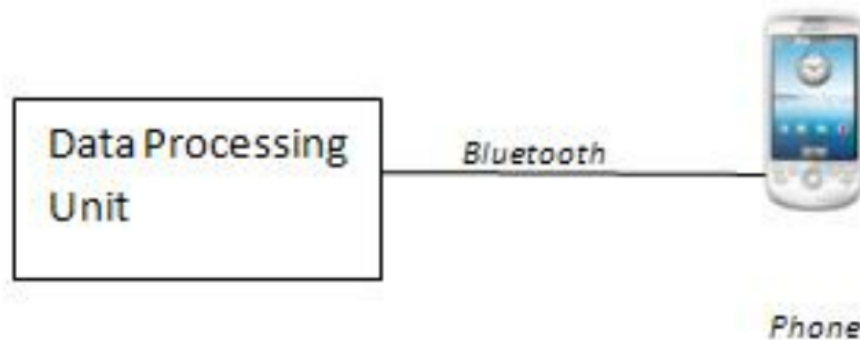
## Communication Through Server



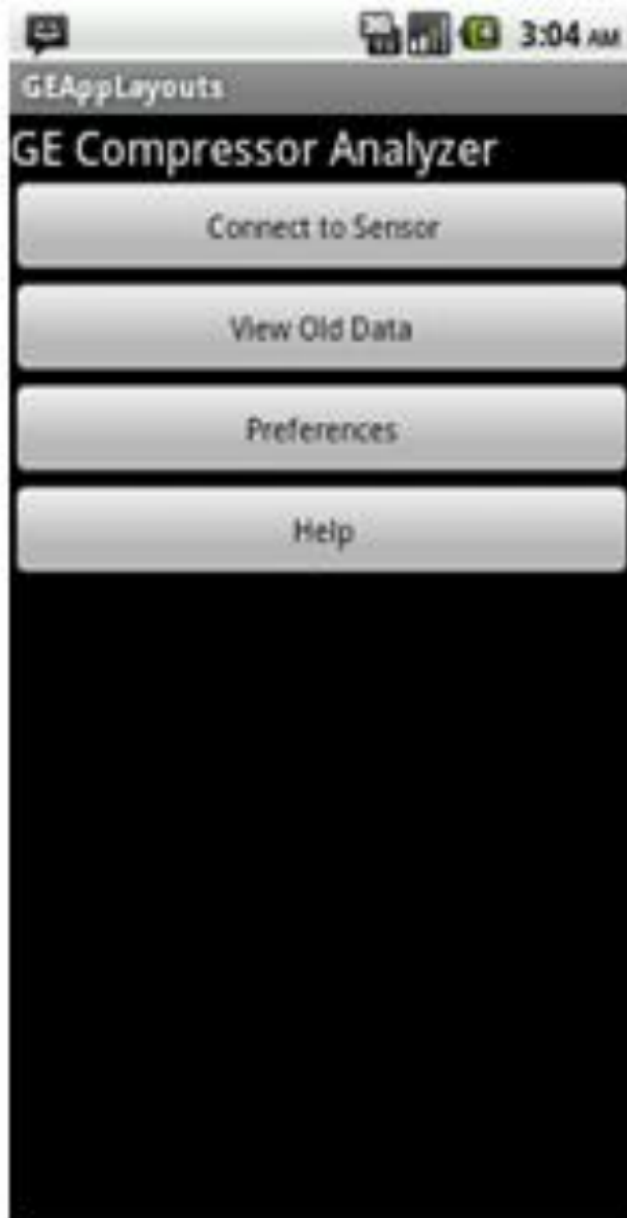
## Direct WiFi to WiFi



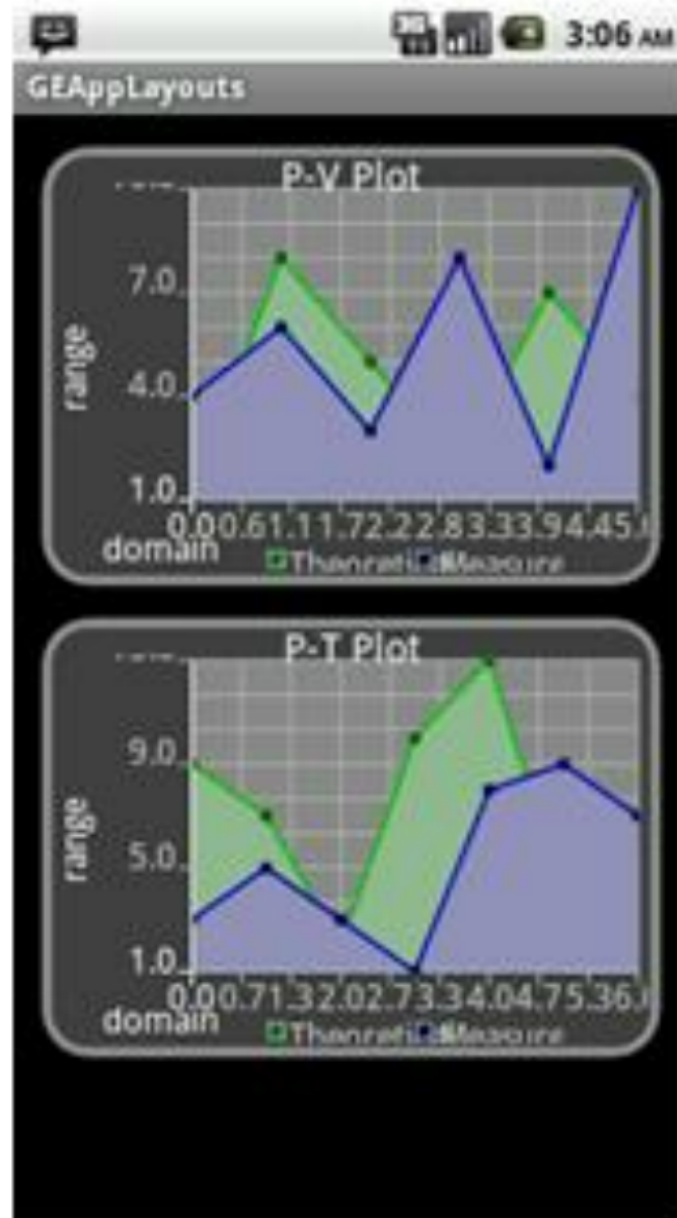
## Bluetooth Module



# Starting Menu



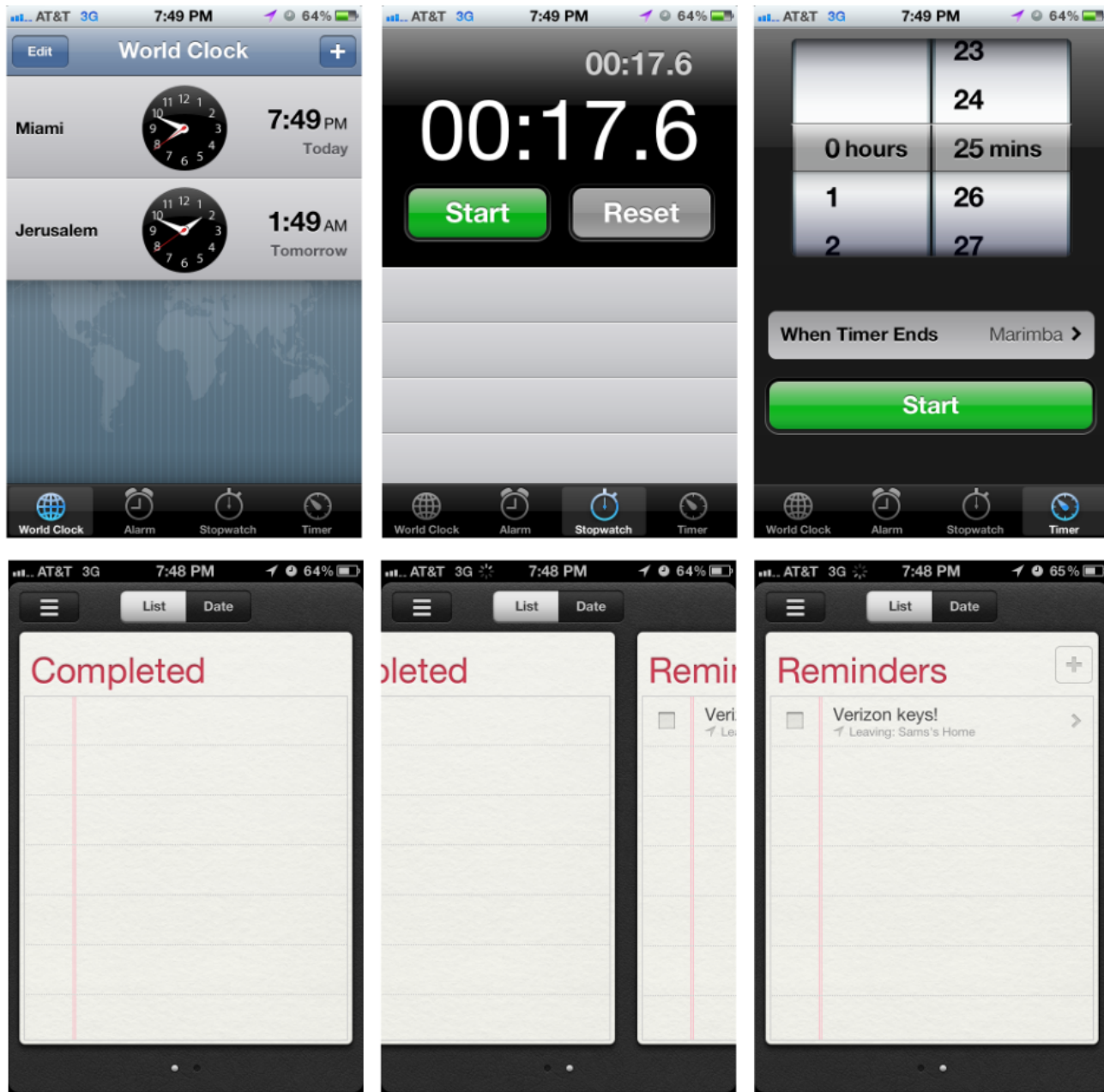
# Vertical Layout



# Landscape Layout Options

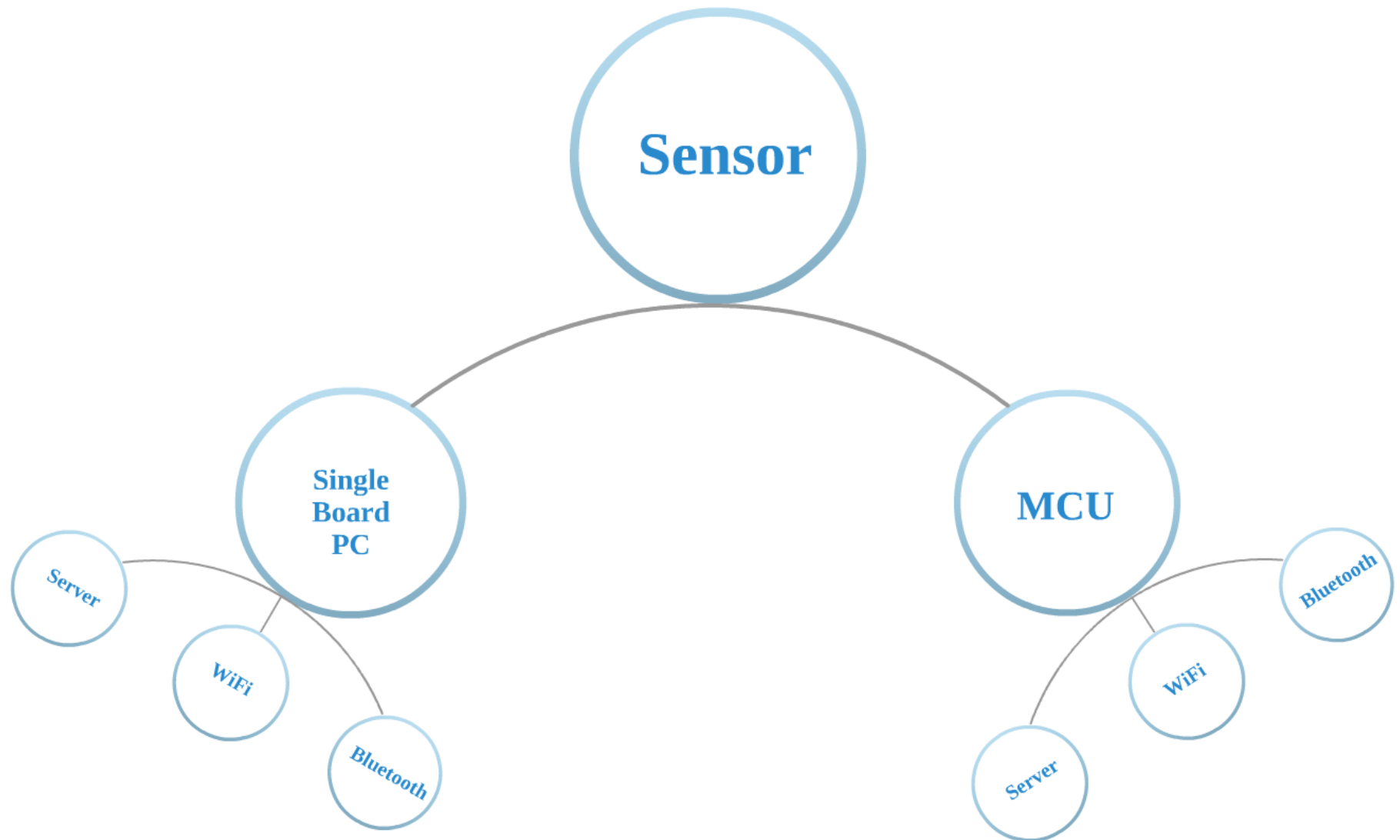


# Methods for Information Delivery



Yes, It's from an iPhone

# Decision Tree



# Cost Analysis

<b>Sensors</b>	<b>Low</b>	<b>High</b>			
Cheaper ultrasonic flow meters	\$1,300	\$1,600			
GE PT878GC		\$5,300			
<b>Single-Board PC</b>		<b>Microcontroller</b>			
Single-Board PC	\$150	\$400	MCU	\$25	\$125
WiFi interface	\$30	\$60	WiFi Shield	\$90	\$90
Battery pack	\$20	\$90	Battery pack	\$20	\$50
Windows XP		\$87			
<b>Subtotal</b>	<b>\$200</b>	<b>\$637</b>	<b>Subtotal</b>	<b>\$135</b>	<b>\$265</b>
		<b>Low</b>	<b>High</b>		
<b>Total</b>	<b>\$1,435</b>	<b>\$2,237</b>			

Table 1 - Estimated Costs