Are Field Audits Dead?

Presented by
Susan Gilbert, CEO
Joel Gilbert, P.E.
Chief Software Architect

R.I.P.
FIELD AUDITS?
Susan Gilbert  
CEO & Co-Founder  
A career motivated by a passion for energy stewardship.  
Driven to leverage technology to help customers understand and better manage energy.

Joel Gilbert, P.E.  
President, Chief Software Architect  
Leads Apogee’s accomplished team of engineers, data scientists, analysts, and researchers.  
Responsible for applying highest standards of excellence in building science and engineering, applying artificial intelligence and predictive analytics to build strong customer relationships.

“Moving from anecdotes to analytics!”
AGENDA

#1
You CAN effectively audit without visiting homes

#2
Targeting for efficiency and cost effectiveness

#3
Ongoing customer engagement

#4
New frontier of home diagnostics

You CAN effectively audit without visiting homes
Evolution of Health Care

Traditional
Early Use of Technology
Remote
The Future
How It All Began...

1973 and 1978 Oil Embargos
1977 Jimmy Carter’s Fireside Chat

...43 Years Ago

- Energy independence is the “Moral Equivalent of War”
- Established Department of Energy
- Formed the National Energy Policy act of 1978 which...
  - Launched the Residential Energy Conservation Program (RCS)...
  - Mandating IOUs do free audits
Thousands of energy auditors trained
Tools of the Trade

• Our Bible
• Mine Signed by Project Manager Gary Bunce
Five-Day Auditor Training

- Heat Transfer
- Conversions
- Building Envelope
- Mechanical Systems
- Special Problems
- Conservation Measures
- Cost & Savings Analysis
- Solar & Wind
- Putting It All Together
In the 1980s...

- Auditors carried phone modems
- Called computers to create audit reports
- Customers were impressed!
Software Enabled In-Home Audits

- Efficient
- Involved Customer
- Instant, Impressive Report
- Profile Data Available:
  - For Mining
  - For Following up
In the 1990s...

Advances in Technology
HOT attics are BAD… and can be DANGEROUS!
Reasons for NOT Doing Field Audits

• Dangerous
• Too Expensive
• Hard to Prove Cost-Effective
• “One-&-Done” vs. Ongoing Engagement
• Don’t Impress Customers
• Especially if they had to Wait
Audit reports lacked appeal
And Today.....

Unless You Are Bringing Pizza
DIGITAL TRANSFORMATION IS YEARS AWAY. I DON'T SEE OUR COMPANY HAVING TO CHANGE ANY TIME SOON.
…going the way of the Dodo Bird
Creating Efficiency in the Energy Efficiency Business
Which Homes Get Audited?

• One calling about high bills?

or

• Ones identified as high potential?

• Ones likely best program candidates?
Analysis Enables Targeting
600,000 Customer’s Summer Calculated Thermostat Settings
Same Customer’s *Calculated* Winter Thermostat Settings

~~~

~ 65% hold 68 F

---

Percent of Customers with that Tstat Temp or Lower
Use Analysis Not Automobile

- Answer 6 Questions
- Run Analysis
- Problem Revealed
- Look Closer…
Don’t Need Site Visit to Diagnose This

<table>
<thead>
<tr>
<th>Bill Date</th>
<th>Avg. Temp</th>
<th>Days</th>
<th>Customers like me Cooling</th>
<th>Customers like me Heating</th>
<th>Heating in Bill</th>
<th>Customers like me Everything Else in Bill</th>
<th>Everything Else in Bill Total</th>
<th>Customers like me Total</th>
<th>Actual Bill Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 29, 2012</td>
<td>51.3 F</td>
<td>29</td>
<td>$0</td>
<td>$0</td>
<td>$5</td>
<td>$5</td>
<td>$67</td>
<td>$202</td>
<td>$207</td>
</tr>
<tr>
<td>Jan 31, 2012</td>
<td>49.0 F</td>
<td>31</td>
<td>$0</td>
<td>$0</td>
<td>$6</td>
<td>$6</td>
<td>$72</td>
<td>$219</td>
<td>$78</td>
</tr>
<tr>
<td>Dec 31, 2011</td>
<td>50.3 F</td>
<td>31</td>
<td>$0</td>
<td>$0</td>
<td>$6</td>
<td>$6</td>
<td>$71</td>
<td>$216</td>
<td>$77</td>
</tr>
<tr>
<td>Nov 30, 2011</td>
<td>55.3 F</td>
<td>30</td>
<td>$0</td>
<td>$0</td>
<td>$4</td>
<td>$4</td>
<td>$68</td>
<td>$202</td>
<td>$72</td>
</tr>
<tr>
<td>Oct 31, 2011</td>
<td>61.4 F</td>
<td>31</td>
<td>$0</td>
<td>$0</td>
<td>$2</td>
<td>$2</td>
<td>$68</td>
<td>$198</td>
<td>$70</td>
</tr>
<tr>
<td>Sep 30, 2011</td>
<td>72.6 F</td>
<td>30</td>
<td>$52</td>
<td>$137</td>
<td>$0</td>
<td>$0</td>
<td>$68</td>
<td>$321</td>
<td>$132</td>
</tr>
<tr>
<td>Aug 31, 2011</td>
<td>82.0 F</td>
<td>31</td>
<td>$351</td>
<td>$928</td>
<td>$0</td>
<td>$0</td>
<td>$132</td>
<td>$321</td>
<td>$1189</td>
</tr>
<tr>
<td>Jul 31, 2011</td>
<td>80.6 F</td>
<td>31</td>
<td>$285</td>
<td>$754</td>
<td>$0</td>
<td>$0</td>
<td>$370</td>
<td>$1,057</td>
<td>$1,057</td>
</tr>
<tr>
<td>Jun 30, 2011</td>
<td>80.7 F</td>
<td>30</td>
<td>$272</td>
<td>$720</td>
<td>$0</td>
<td>$0</td>
<td>$354</td>
<td>$1,036</td>
<td>$1,036</td>
</tr>
<tr>
<td>May 31, 2011</td>
<td>71.2 F</td>
<td>31</td>
<td>$60</td>
<td>$159</td>
<td>$1</td>
<td>$1</td>
<td>$126</td>
<td>$422</td>
<td>$422</td>
</tr>
<tr>
<td>Apr 30, 2011</td>
<td>65.7 F</td>
<td>30</td>
<td>$0</td>
<td>$0</td>
<td>$1</td>
<td>$1</td>
<td>$66</td>
<td>$216</td>
<td>$66</td>
</tr>
<tr>
<td>Mar 31, 2011</td>
<td>55.5 F</td>
<td>31</td>
<td>$0</td>
<td>$0</td>
<td>$4</td>
<td>$4</td>
<td>$70</td>
<td>$208</td>
<td>$74</td>
</tr>
<tr>
<td>Feb 28, 2011</td>
<td>49.4 F</td>
<td>28</td>
<td>$0</td>
<td>$0</td>
<td>$5</td>
<td>$5</td>
<td>$66</td>
<td>$199</td>
<td>$71</td>
</tr>
<tr>
<td>Annual Total</td>
<td></td>
<td></td>
<td>$1,019</td>
<td>$2,699</td>
<td>$27</td>
<td>$27</td>
<td>$2,925</td>
<td>$1,925</td>
<td>$5,651</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monthly Average</th>
<th>Avg.</th>
<th>Cooling</th>
<th>Heating</th>
<th>Everything Else</th>
<th>Total</th>
<th>Bill Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30</td>
<td>$85</td>
<td>$225</td>
<td>$2</td>
<td>$73</td>
<td>$244</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$160</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$471</td>
</tr>
</tbody>
</table>
Building Customer Trust with Savings Estimates

- **Accuracy** in savings predictions matter
- Table-look-ups *don’t* cut it
- Deemed savings mean nothing to customers
- Contractor match-up don’t provide likely savings
- Contractors often exaggerate savings

Build Trust by Providing **Accurate**, **Conservative** Estimates
Accuracy Levels

Highest Diagnostic Level
- Retrofit Savings
- HERS Ratings

Diagnostic
- Blower Door
- Duct Blaster

Survey Tools
- Data Collection
### Test Results

<table>
<thead>
<tr>
<th>Tests</th>
<th>Apogee</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>25</td>
<td>91%</td>
<td>76%</td>
<td>76%</td>
<td>81%</td>
<td>86%</td>
</tr>
<tr>
<td>Test 2</td>
<td>76</td>
<td>89%</td>
<td>75%</td>
<td>77%</td>
<td>61%</td>
<td>42%</td>
</tr>
<tr>
<td>Test 3</td>
<td>58</td>
<td>87%</td>
<td>83%</td>
<td>76%</td>
<td>76%</td>
<td>80%</td>
</tr>
</tbody>
</table>

EnergyInsights™ V5
APOGEE Interactive, Inc.
100 Crescent Centre Parkway, Suite 430
Atlanta, GA 30304
Phone: 678-684-6804
Fax: 678-684-6832
Email: joel@apogee.net
Website: www.apogee.net
Contact: Joel Gilbert, P.E., Chief Software Architect
Accreditation Identification Number: 2006-003

REM/Rate v12.96
Architectural Energy Corporation
2540 Frontier Avenue
Suite 100
Boulder, CO 80301
Phone: 303-459-7438
Email: rpsaldido@archenergy.com
Contact: Robert Salcido, P.E.
Accreditation Identification Number: 2006-002
# Bill Prediction Accuracy Scores

100%=Perfect Accuracy  
Vendor B in this table is APOGEE

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prediction</td>
<td>71.4%</td>
<td>91.6%</td>
<td>59.3%</td>
<td>79.8%</td>
<td>85.3%</td>
<td>89.8%</td>
<td>70.3%</td>
</tr>
<tr>
<td>High Bills</td>
<td>82.1%</td>
<td>95.4%</td>
<td>77.7%</td>
<td>86.3%</td>
<td>88.3%</td>
<td>88.4%</td>
<td>88.1%</td>
</tr>
<tr>
<td>Low Bills</td>
<td>74.6%</td>
<td>88.7%</td>
<td>73.3%</td>
<td>52.4%</td>
<td>77.2%</td>
<td>70.5%</td>
<td>77.4%</td>
</tr>
<tr>
<td>Random 1</td>
<td>84.7%</td>
<td>94.7%</td>
<td>78.8%</td>
<td>76.4%</td>
<td>82.9%</td>
<td>88.6%</td>
<td>87.7%</td>
</tr>
<tr>
<td>Random 2</td>
<td>85.9%</td>
<td>85.6%</td>
<td>88.5%</td>
<td>84.3%</td>
<td>71.8%</td>
<td>90.2%</td>
<td>81.7%</td>
</tr>
<tr>
<td>Average</td>
<td>79.8%</td>
<td>91.2%</td>
<td>75.5%</td>
<td>75.8%</td>
<td>81.1%</td>
<td>85.5%</td>
<td>81.0%</td>
</tr>
</tbody>
</table>
Results Test Bank 1 in BESTEST EX Savings Predictions
Results Test Bank 1 in BESTEST EX Savings Predictions

- Replace old windows
- Insulate the attic
- Weatherize the shell
- Reduce heating setting
- All of the above
Results Test Bank 2 in BESTEST EX

APOGEE

80% of the time within 10% of the Correct Answer
Results Test Bank 3 in BESTEST EX

Cooling, Precision, close look
higher is better

80% of the time within 10% of the Correct Answer
Access Accurate Answers with Self-Serve Online Audit
Include and Promote Electric Vehicles
Promote Solar

Make it Easy!

Keep it Simple!
Recommendations

- Speak Their Language
  Dollars?
  Carbon Impact?
- Dollarized Recommendations
- Appealing Program Links

EnergyWise Attic Insulation Program
Recieve up to $300 towards upgrading your attic insulation by participating in this EnergyWise program.
Monthly Disaggregation

Your Monthly Electric Cost Breakdown

Show All  Show Solar  Show Default

Daily Drilldown

Your Monthly Electric Cost Breakdown

Show All  Show Solar  Show Default

Show Monthly Cost Chart

Show Monthly Cost Chart

Your Bills + Solar
Your Bills
Solar Use
Cooling
Lighting
Base Charge
Refrigeration
Appliances
Cooling
Base Charge
Refrigeration
Pool
Lighting

Sep 26,19
Avg. Temp: 83.9°F
Cooling: $3.68
Total: $6.18

Back To Previous
Relevant Outbound Messaging

Informative proactive tips and rebates

Mid-month notification
Post Audit Messaging – Stay Connected

Hi John Smith,

Thank you for using our Energy Advisor! There were several programs suggested to help you save based on your personal home profile.

One of these is our EnergyWise Attic Insulation Program. You can receive up to $300 towards upgrading your attic insulation by participating in this program. Learn more...

You can update your profile at any time. Click here to make changes or see more personalized savings tips!

Our mailing address is:
123 Main Street, Atlanta, Georgia

Want to change how you receive these emails?

Did you know you may be eligible for a rebate when you purchase a smart thermostat through our Utility Marketplace? Visit our website at www.utility.com/marketplace and save up to 50% when you purchase a new thermostat.

Use our Programmable Thermostat Calculator to find the best thermostat settings to save energy and money!

Our mailing address is:
123 Main Street, Atlanta, Georgia

Want to change how you receive these emails? You can update your preferences or unsubscribe from this list.
Automated Marketing…
Relevant, Timely Engagement Throughout the Year

Drive TARGETED program participation
Increased visibility through planned, ongoing customer engagement
Establishes loyalty, trust, builds Customer Satisfaction

Annual Marketing Campaign

- Rate Communication TOU and/or Demand Rate
- Pre-cooling Season
- Automation Marketing for EV Program
- Automation Marketing for Lighting Program
- Carbon Footprint Awareness
- End of Year Summary
- Automation Marketing for Rate Program
- Appliance Calculator
- Electric Vehicle Program
- Lighting Program
- Pre-heating Season
- Appliance Program
- (Targeted) Video Bill Explanation
- (Targeted) Video Bill Explanation
- (Targeted) Video Bill Explanation
Personalized Video Messages Proven Results:

- **99%** Recipients request *more* videos
- **97%** Rate videos very or somewhat USEFUL
- **37%** Click-thru rates …18 *times* Industry Standard
- **24 to 100** Point increases in JD Power scores
- **15%** Reduction in high bill calls
EKG monitoring defines **Heart Health**

Thermal monitoring defines **Home Health**

**Precision Temperature Monitoring**
For Homes and Small Business

We call it the "**Heartbeat of the Home**"
Energy Industry performance metrics

• Thermal Envelope statistics
• Thermostat performance
• Trends and alerts to identify:
  ✓ Comfort challenges
  ✓ Refrigerant leaks
  ✓ Filter replacement
  ✓ Retrofit performance
Branded PTM Devices

Inexpensive, high-resolution temperature monitoring device connects to smartphones or Wi-Fi

Temperature vs. Time of Day for Tuesday

AC ran 5 Hours and 11 Minutes
High Resolution Allows Calculation of On and Off Cycles

Use all data when HVAC is ON

Use first half to solve for OFF time

Use last half of the “coast” period to solve for ON time
From the First Law of Thermodynamics

\[ C_p \frac{dT}{dt} = UA (T_{OAT} - T_{IAT}) + Q_{INT} + Q_{Solar} \]

Since the mass of the house \( C_p \) doesn’t change on weatherization and we are comparing temperature changes at night before and after weatherization:

\[ \frac{dT}{dt} = UA (T_{OAT} - T_{IAT}) \]
Shell Efficiency Precisely Measured!

Temperature Change Rate (TCR) = -0.41 Degree F/Hr.

Indoor Temp = 78.9
Outdoor Temp = 62.5
Difference = 16.4

TCR% = -0.41/16.4 = - 2.50%

2.5% is excellent for new construction
Attic Insulation in Summer

Moving from Anecdote to Analytics

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (F)</th>
<th>TCR (F/Hour)</th>
<th>OAT</th>
<th>OAT - IAT</th>
<th>TCR %</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:15 AM</td>
<td>77.29</td>
<td>8.7</td>
<td>83</td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td>1:15 AM</td>
<td>78.82</td>
<td>1.53</td>
<td>82</td>
<td>6.2</td>
<td>24.77%</td>
</tr>
<tr>
<td>2:15 AM</td>
<td>79.26</td>
<td>0.44</td>
<td>81</td>
<td>4.7</td>
<td>9.26%</td>
</tr>
<tr>
<td>3:15 AM</td>
<td>79.57</td>
<td>0.31</td>
<td>81</td>
<td>4.4</td>
<td>6.94%</td>
</tr>
<tr>
<td>4:15 AM</td>
<td>79.83</td>
<td>0.26</td>
<td>82</td>
<td>5.2</td>
<td>5.11%</td>
</tr>
<tr>
<td>5:15 AM</td>
<td>80.10</td>
<td>0.26</td>
<td>81</td>
<td>3.9</td>
<td>6.77%</td>
</tr>
<tr>
<td>6:15 AM</td>
<td>80.27</td>
<td>0.18</td>
<td>81</td>
<td>3.7</td>
<td>4.73%</td>
</tr>
</tbody>
</table>
What are Load Control Switches Doing?

Analysis provides minute-by-minute details in energy use.

AC Ran Fully For One Hour

AC Ran Fully For One Hour
Compare Thermal Performance

Thermal Performance

% (Outside Air Temp – Indoor Air Temp) changed in one hour
Compare Thermal Improvement

% (Outside Air Temp – Indoor Air Temp) changed in one hour

House Should Move Left!
Weatherization: Compare Thermal Performance

**House 1:** 1948, 1,663 sf

**House 2:** 1959, 852 sf

**House 3:** 1975, 1,236 sf

**House 4:** 1987, 2,200 sf

**Thermal Performance (% of Delta T/Hr)**

- **Best**
- **Worst**

---

2020 APRIL WEBINAR | ARE FIELD AUDITS DEAD?

57
Multiple Loggers in House Show Air Balance Problems

Downstairs 3.0%
4.1%
4.2%
3.2%
5.7%
48 F Outside
Your Home Energy Opportunity Report

<table>
<thead>
<tr>
<th>Room for Improvement</th>
<th>Little</th>
<th>Much</th>
<th>Explanation</th>
<th>Potential Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermostat:</td>
<td></td>
<td></td>
<td>Upgrading your thermostat can produce substantial savings.</td>
<td>$150</td>
</tr>
<tr>
<td>Control Range</td>
<td>⭐</td>
<td></td>
<td>This thermostat is holding 2 degrees cooler than the actual air temperature which could be costing you as much as $150</td>
<td>$175</td>
</tr>
<tr>
<td>Accuracy</td>
<td>⭐⭐</td>
<td></td>
<td>A high performance thermostat will hold a more consistent temperature. Yours is allowing the temperature to vary.</td>
<td>$224</td>
</tr>
<tr>
<td>HVAC Performance:</td>
<td></td>
<td></td>
<td>Upgrading to a new, high-efficiency (16 SEER) air conditioner can produce these savings.</td>
<td>$124</td>
</tr>
<tr>
<td>Operating SEER</td>
<td>⭐⭐⭐</td>
<td></td>
<td>Your HVAC system is oversized. A properly sized unit will run more frequently for longer periods before humidity control.</td>
<td>$52</td>
</tr>
<tr>
<td>Size Performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Heater:</td>
<td></td>
<td></td>
<td>You are using 7% less hot water than your base period, which equates to a savings of about this amount.</td>
<td>$7</td>
</tr>
<tr>
<td>Hot Water Use</td>
<td>⭐⭐⭐⭐⭐</td>
<td></td>
<td>Lowering your water heater temperature setting saves money.</td>
<td>$20</td>
</tr>
<tr>
<td>Temperature Setting</td>
<td>⭐⭐⭐⭐</td>
<td></td>
<td>Lowering your water heater temperature setting saves money.</td>
<td>$20</td>
</tr>
<tr>
<td>Shell Performance:</td>
<td></td>
<td></td>
<td>Weatherstrip your doors and windows, close drapes to keep sun out, and add insulation to your attic to save money.</td>
<td>$205</td>
</tr>
<tr>
<td>Thermal Efficiency</td>
<td>⭐⭐⭐⭐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal Gains</td>
<td>⭐⭐⭐⭐</td>
<td></td>
<td>Be sure to turn off unneeded lights and electronics.</td>
<td>$55</td>
</tr>
<tr>
<td>Behavior:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holding settings</td>
<td>⭐⭐⭐⭐⭐</td>
<td></td>
<td>Holding 78F in the summer and 68F in winter can save money.</td>
<td>$96</td>
</tr>
<tr>
<td>Aggressive DR</td>
<td>⭐⭐⭐⭐</td>
<td></td>
<td>Savings if full participation estimated at:</td>
<td>$225</td>
</tr>
<tr>
<td>Hot Water Use</td>
<td>⭐⭐⭐⭐</td>
<td></td>
<td>Using less hot water saves money on energy bills.</td>
<td>$30</td>
</tr>
</tbody>
</table>

Compare Thermal Performance

- Indoor Air Temperatures
- Average Thermostat Settings
- Thermostat Control Band
- Thermostat Setting Consistency
- House Shell Efficiency
- Air Conditioner Size Adequacy

Best
- Excellent
- OK/Fair
- Needs Work
- Inefficient

Worst
- Your home during the testing period
Virtual Audit Report

Smith Home Energy Evaluation

March 7, 2018
Marlen Smith
10345 Pine Garden
West Palm Beach, FL 33491

Dear Ms. Smith,

Thank you for participating in Apogee E&G Home Evaluation Program! We have analyzed data from the four monitors placed in your home from February 1st through February 15th. During this 14-day period, the monitors have been reporting temperature and humidity information from your home to our cloud-based energy modeling system.

By analyzing how your home heats up and cools off, our energy model evaluates how your home’s appliances, HVAC, and structure are performing and looks for ways to save money on your energy bills.

This report, based on your home’s data, highlights ways you can improve comfort and save money making some relatively easy changes. If you would like more information, a more in-depth analysis is available upon request.

Sincerely,

Susan Gilbert
Susan Gilbert, Apogee E&G

---

Summary

This chart summarizes how your home and systems rated during our test period when monitors were in your home. The following pages give more descriptive details of each of these metrics. Where improvements are recommended, we have estimated your potential savings and pointed out possible available rebates that can save you money!
Thermostat Settings

This chart summarizes the average outdoor air temperatures and your indoor temperatures measured during the period the monitors were recording. The estimated run-time for your air conditioner is also shown as the blue bars in hours each day.

It is not unusual for a home’s indoor temperatures to be different from what you are setting on your thermostat. Thermostats are often 2-3 Degrees F off. It looks as if you are doing a great job of consistently setting your thermostat up by several degrees when you are away. We estimate that simple action is saving you $XX dollars a year.

Thermostat Performance

The thermostat controls when your HVAC system runs. It turns your system on when the temperature in your home drops outside its “control band.” And when the temperature setting is achieved, the thermostat turns the system off.

A thermostat’s control band can affect your comfort. A tight control band of half-a-degree or less is excellent, but some thermostats have control bands of 2 or 3 degrees, which can make occupants uncomfortable before the thermostat activates and more costly to operate.

While the monitors were in your home, we measured your thermostat’s control range and found it is in the poor range, holding a wide band-width of 2.5 F.

Upgrading your thermostat can improve your comfort in the home and save you money on the operating of your heating and air conditioning systems. We estimate you could save as much as $XX by upgrading your thermostat. Check out our online store where you will also find instant rebates on some devices.
SUMMARY

#2 Targeting enables efficiency and cost effectiveness

#4 New frontier of home diagnostics

#1 You CAN effectively audit without visiting homes

#3 Ongoing customer engagement
Any Questions
Upcoming Webinars

APRIL 28th, 2020

“Realistic and Cost Effective Artificial Intelligence”

by:

Sydney Roberts, PhD
Joel Gilbert, President and Chief Software Architect
Apogee Interactive, Inc.

MAY - TBA 2020

“Relating New Rates Using Personalized Videos”

by:

Apogee Interactive, Inc.
Karen Morris, Marketing Manager
info@apogee.net
678-684-6801
apogee.net