



National School IPM 2020 Steering Committee Conference Call Notes for November 16th

The Steering Committee meets via conference call on the third Friday of each month at 1:30PM CST. The following notes are for **November 16th, 2018**.

Roll

- Julian Cooper, IPM Institute
- Madeline Zastrow, IPM Institute
- Scott Broaddus, Bayer
- Alexander Ko, Bayer
- Tom Green, IPM Institute
- Shaku Nair, University of Arizona
- Eric Denemark, California Department of Pesticide Regulation
- Lucy Li, University of Arizona
- Joe LaForest, Southern IPM Center
- Lynn Braband, New York State Community IPM Cornell
- Dawn Gouge, University of Arizona
- Joellen Lampman, New York State Community IPM and Cornell
- Seth Dunlap, Arkansas Agriculture Department
- Allie Allen, National Pest Management Association
- Matt Bauer, Western IPM Center

Agenda

1. Guest Speaker: Scott Broaddus and Alexander Ko from Bayer
2. Regional updates (group)
3. Agenda items for next call (group)

1. Presentation from Bayer on Rodent Remote Sensing Technology

- Four years ago, in conjunction with NPMA, brought key leaders in PMP industry together for a workshop to highlight future of the industry
 - Changing regulations
 - Technology impact on pest control business
 - Work force evolving and changing
- Created corporate enterprise in Bayer to focus on IoT (Internet of Things) remote monitoring
- Rodents top of the list when communicating with customers
 - Public health threat
- Remote monitoring not only about the device
 - How we refine and return to IPM
 - How the customer will benefit
 - Predictive and preventive
 - Actions only taken when pests are likely to exceed acceptable levels
- Why did we focus on IoT for rodents?



- Major focus on food safety
- Very relevant to other environments, i.e., schools
- Problem with current monitoring
 - Timeliness
 - What happens between day 1 and day 30 between technicians visit the account and inspect monitors?
 - Only getting snapshots of pest activity
- IoT technology offers a solution to this problem
 - When “things” start to think
 - “embedded internet”
 - “pervasive computing”
 - The natural evolution of machine to machine communication
 - Distributed sensor network connects people and systems
 - Shares sensor data with each other
 - Sensors working together to share information
 - Can act without human intervention
- Rodent monitoring problem in particular – technicians spend about 75% of time checking traps, most end up being empty
 - A global view allows a PMP to get a holistic view of pest environment
 - IoT also allows a granular view into the pest’s world
 - Identify pest-conducive conditions
 - Spatial visibility
 - IoT allows to view traps in spatial relation to one another
 - For example, how is trap 15 related to trap 1?
 - Temporal visibility
 - For example, captures at a location at noon – employees have been propping doors open at that time every day
 - Intelligently respond to pest environment
- Simple View of IoT solution
 - Things – Insights – Actions
- Bayer Remote Monitoring System
 - How can we work smart, not harder?
 - Mouse enters – radio signal sent – gateway passes info to the cloud – alert sent to user – alert received – respond
 - Rodent Sensors Network
 - Signal is different from Wi-Fi
 - Long-reaching signal, 3-mile radius
 - Penetrates concrete and steel
 - Provides 24/7 monitoring and real-time capture notification alerts
 - Provides daily status reports, “heartbeat” messages



- Provides up-to-the-minute trending
- Gateway can scale to 1,000+ sensors
- Battery powered +/- 4 years
- Dust and water resistant (IP54)
- Power of insights and actions
 - Transforming insights into actionable results
- Value creation through strategic use patterns
 - Costly service locations
 - Restricted access
 - Service escalation
 - Difficult access
 - Risky situations
 - Sensitive areas
- Questions/comments:
 - Tom Green: I've encountered traps many times while evaluating facilities and found an entire ecosystem in the traps with rodent carcass and other organisms
 - Julian Cooper: What does it cost to set up a moderate monitoring system?
 - Most business is to service providers
 - Couple hundred dollars/month for a 20-sensor system
 - Julian Cooper: How many sensors are required in a multi-story school with 2,500 students?
 - Depends on where you want to monitor more heavily
 - Strategic approach: Place in areas only of higher-risk because of certain activities or conducive conditions
 - Eric Denmark: Any plans to put this technology in models other than the Tin Cat? Exterior bait stations?
 - Yes
 - Can retro-fit sensor on T-Rex snap traps and multi-catches
 - Mechanical device
 - Also looking into sensors for insect traps
 - Lynn Braband: There are systems for box traps for nuisance wildlife that indicate a capture.
 - Wildlife traps are required to be checked every day by state agencies
 - Tom Green: Where are you at with marketing? Are there national companies that have the system available?
 - We've been on the market for a little over a year
 - PestWorld October 2017 launched
 - 55-60 systems in the field
 - Biggest challenge: disruptive because it requires you to change business model and how you service
 - Not in any schools yet
 - Julian Cooper: Technology sounds easy to install when it can be quite complex in reality



- Can be super complex because of design of facility, etc.
- Customer support and installation specialists will inspect facility before installation
- Unique part is that it operates independently from existing network at facility
- Installation done through app – intuitive
- Dawn Gouge: Can you explain reasoning behind wildlife and remote observations?
 - Lynn Braband: state agencies are uncomfortable that there isn't a body there checking the trap, concerned with treatment of the animal
 - 24-hour maximum trap check regulation

2. Regional Updates

- Western region
 - No updates currently
- Southern region
 - Joe LaForest: Southern IPM Center grants submitted
- Northeast region
 - Lynn Braband: submitted grant proposal to NE IPM Center to reorganize and update Best Practices on NE IPM Center website and WG website
- Northcentral region
 - Julian Cooper: submitted School IPM WG grant to NC IPM Center

3. Agenda items for next call (group)

Send suggested agenda items for next month to jcooper@ipminstitute.org! **Next call on December 21st.**

The coordination of the National School IPM Steering Committee is supported by funding of the USDA North Central IPM Center. The next conference call will take place on **Friday, December 21st**. Future calls will continue to fall on the third Friday of each month at **1:30 PM Central time**.