



CES & M2M #NYCFW Hackathons

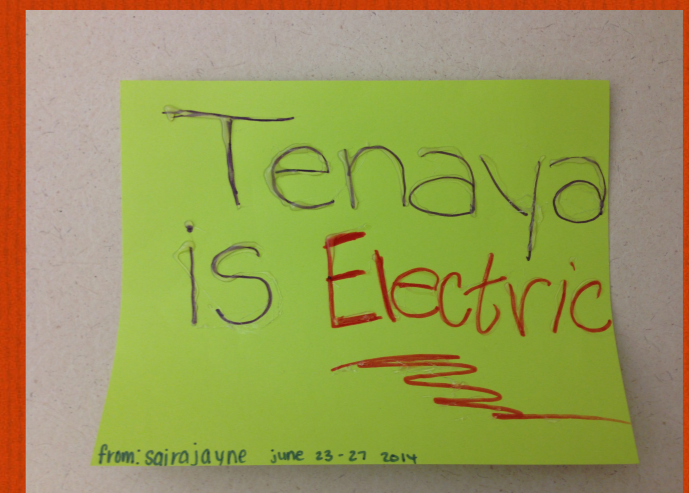


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AT&T hackathon - Palms



- 100s of Developers
- \$1000s in prizes
- Dozens of Sponsors / APIs
- open theme of apps or hardware innovation





AT&T Dollhouse

to control for demos
door, lights, windows,
garage door/dog door



A Lab Coat that Got Her Dreaming

AS A MAKER, TENAYA HURST IS ALL IN.

She's got her own website with a store that sells electronic kits. Her personality shines in a rap video she produced and starred in called "I'm So Maker." She goes by @arduinowoman on Twitter. She teaches a wide range of workshops for adults and children at summer camps and makerspaces. She calls her business Rogue Making, and she is an evangelist for the company that produces Linino, a gig she got through a connection made at her first Maker Faire. Tenaya says that she's always been a maker, yet she recalls the specific day when she discovered electronics. It was March 16, 2013. She was at the Tech Museum of Innovation in San Jose where she worked as a lab instructor and was asked to participate as a facilitator in an Open Make session.



Her colleague, Romie Littrell, had created a conductive lab coat that could be "played" like a musical instrument, just by touching it. He explained that he had put an Arduino in the pocket of the coat and used pieces of conductive fabric as sensors. "When you shook someone's hand, which grounded the circuit, a person could 'play' the pads by touching them," says Tenaya. "It generated all kinds of sounds." The lab coat was a revelation to her and an introduction to the world of wearables. "My mind was completely blown," she says. "You start playing the fabric like a keyboard. I was just so excited." That lab coat set her on a journey that can be an example to young makers everywhere.

After that event, Tenaya sought out people who could help her learn more about Arduino. She attended a workshop organized by Make:SF and learned soldering through a project called Bliplace, a nickel-sized microcontroller with sensors and LEDs that reacts to ambient sound. She started to make her own necklaces and earrings, and she began wearing them in public. They started conversations that otherwise might not have happened. "It gets other people's minds going," says Tenaya. This is what fashion really does, and wearables do it in startling fashion —

"I WANTED TO HELP PEOPLE REALIZE THAT AFTER THEY DO A FEW EXPERIMENTS, THEY BEGIN TO FIGURE OUT WHAT THEY WANT TO DO."

attracting people to interact with you. She loves teaching, confessing that she started teaching electronics to others even before she understood everything she was doing. "I wanted to help people realize that after they do a few experiments, they begin to figure out what they want to do," she says. "You'll start dreaming of your own electronic projects."

Tenaya is more into the electronics than the fashion. "I want to add electronics to garments that already exist," she says, noting that she works with LilyPad. "I like to make things that are interactive."

Her path is one that more girls will follow to discover making for themselves, which can prepare them for careers in science

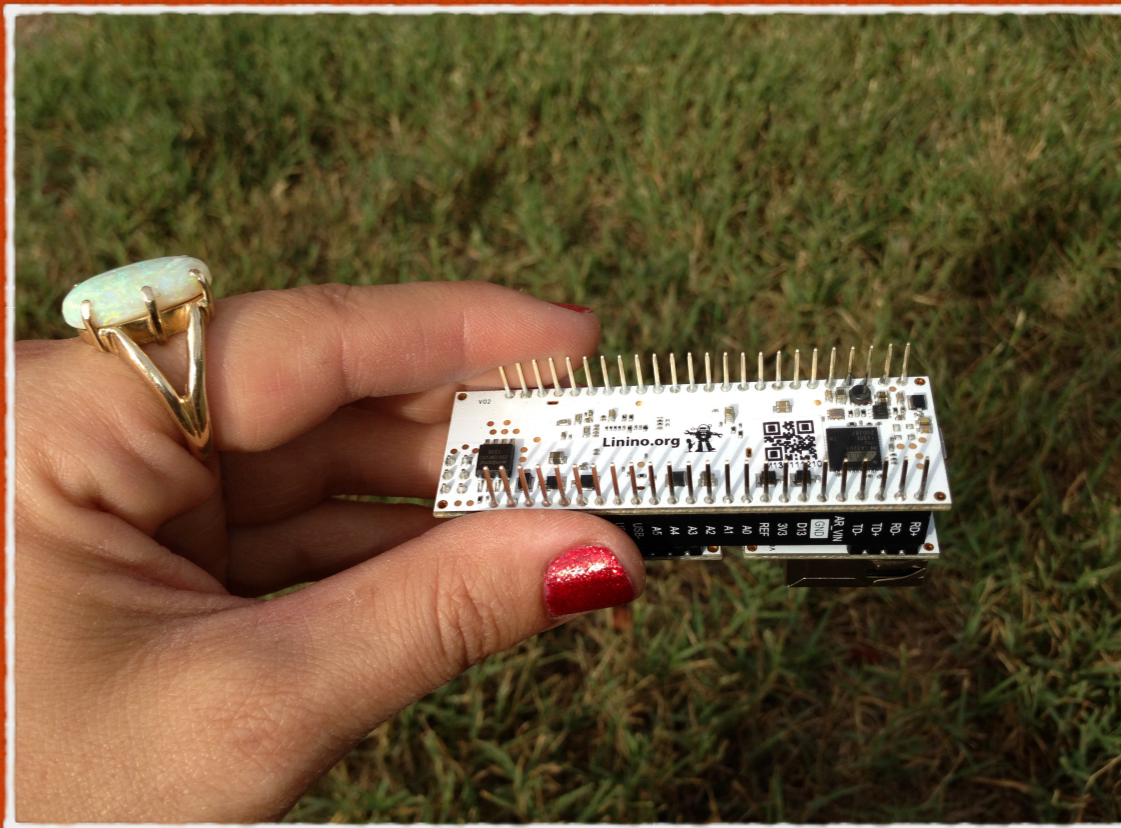
and technology. A new research report from Intel (intel.ly/makehers) coins a wonderful term, "MakeHers," and their survey of tween and teen girls found that one in four has made things using technology in the past year, and seven in 10 would have a desire to learn to create with electronics.

The report notes that girl and women makers are more likely (than men) to discover making through various paths, especially relying on personal connections as resources throughout their making process. The report adds, "girls who make, design, and create things with electronic tools develop stronger interest and skills in computer science and engineering." One of its recommendations is that parents and schools "support and customize making projects based on the identities and interests of participants, whether aesthetic, joyful, or related to helping others." Renee Wittmeyer of Intel, who led the research effort, told me:

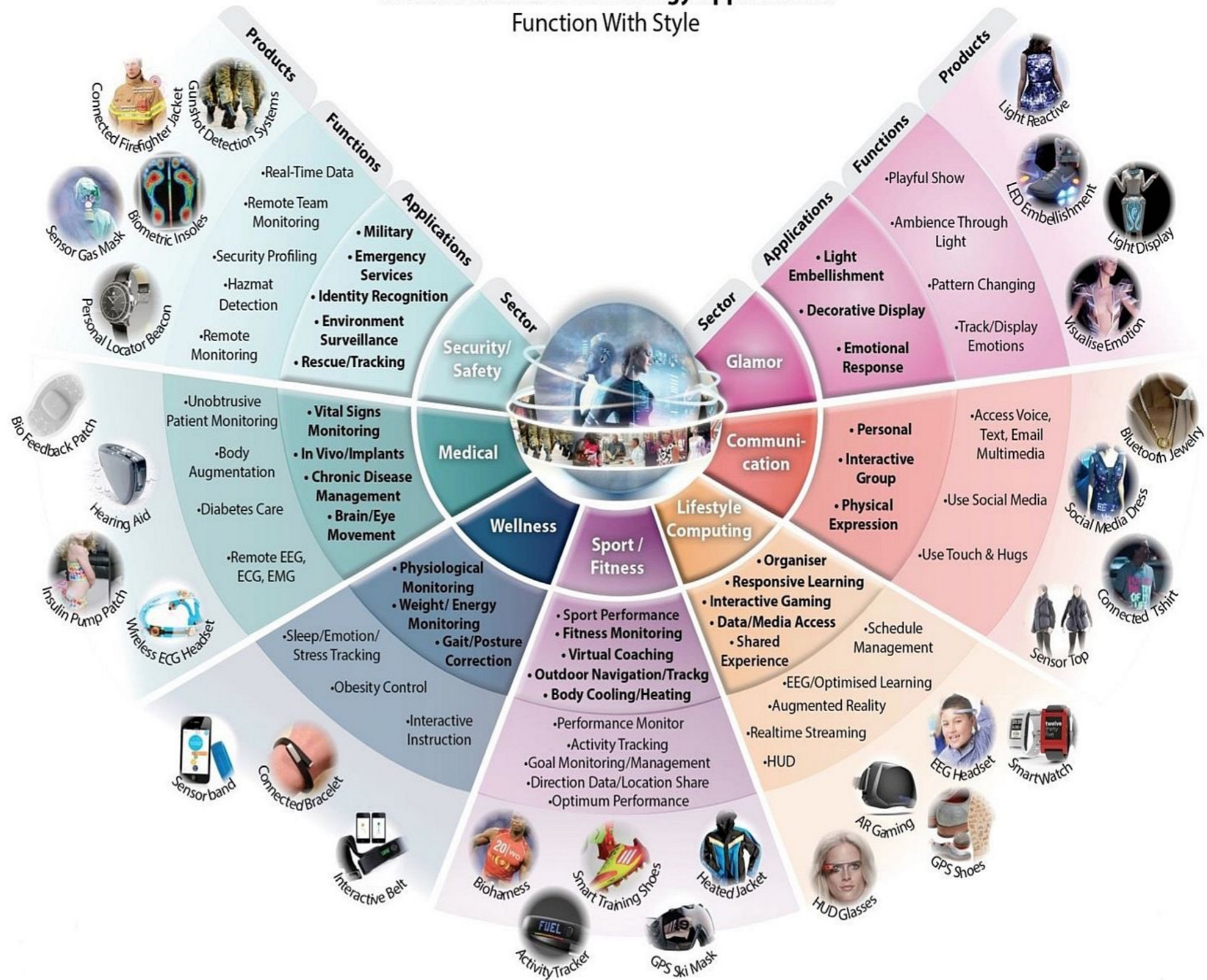
"While the report takes a look at the role of girls and women in making, the recommendations support increasing participation and diversity in making at large for everyone. This means inspiring not only girls and women, but underrepresented minorities, boys, and men who may not be excited with 'technology for technology's sake.' Making creates alternate pathways into the fields of computer science and engineering by building on individual interests."

There is a huge need for mentors, both women and men, who help girls and boys develop their dream projects. It's not just about sharing skills, but also, as Tenaya shows us, sharing the passion for making. AnnMarie Thomas, in her book, *Making Makers*, gives this advice to parents: "Whatever it is you love to make, be sure that the children in your lives get to see that passion." It's the stuff that dreams are made of. ●

BY DALE DOUGHERTY, founder and Executive Chairman of Maker Media.



World of Wearable Technology Applications: Function With Style

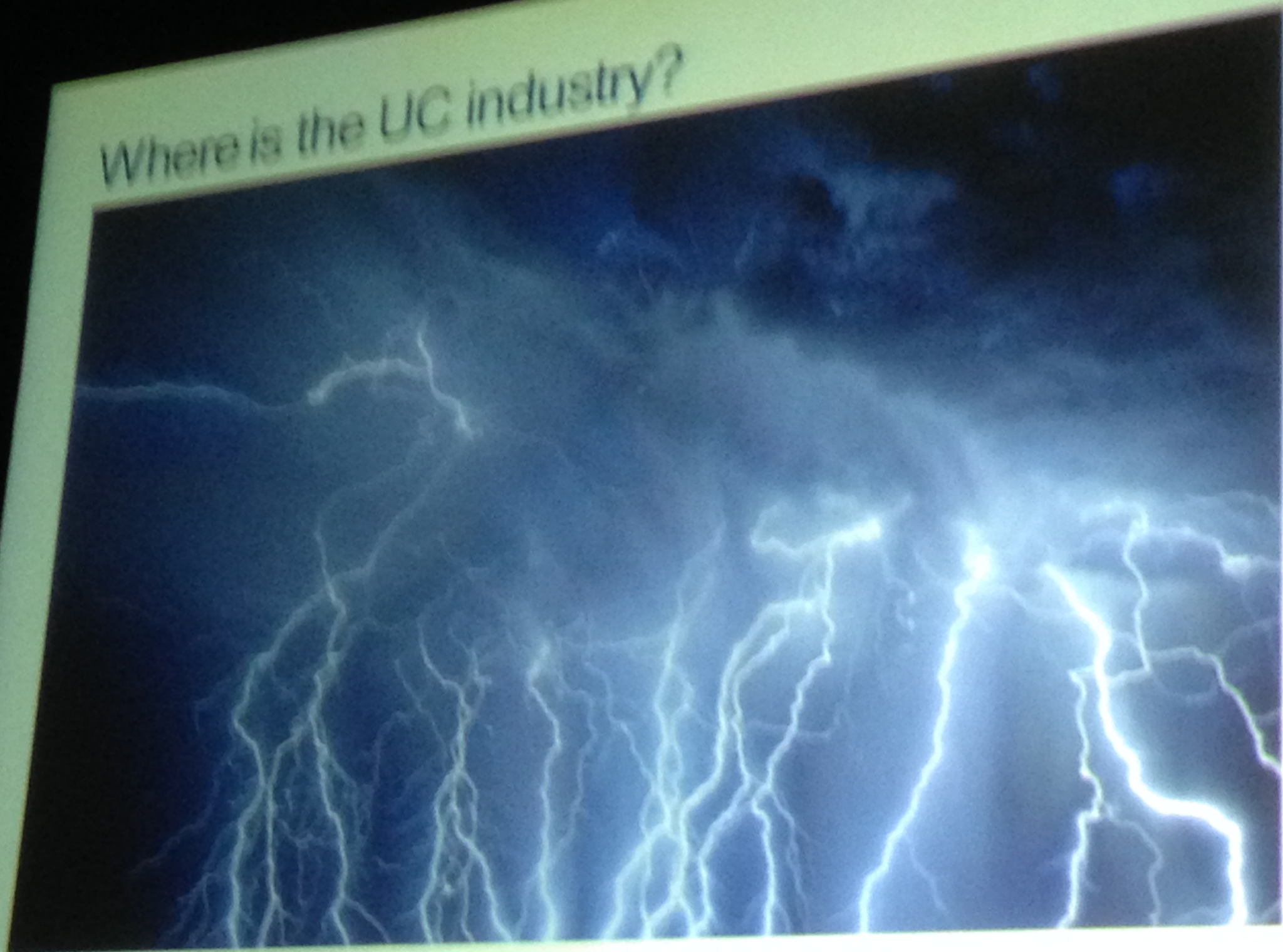


M2M - Machine 2 Machine



- Great conference for telecom
- Making in the workplace
- IoT and Cloud connections
- Necessary Infrastructure
- Next year in Fort Lauderdale

Where is the UC industry?



 Mitel