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RFID News: Visualizing RFID Read Fields

The Magic and the Challenge of RFID is that You Can't See it; LED Wand Tied to Tag Reads Solves that Problem

SCDigest Editorial Staff

Both the "magic" and the problem of RFID technology is that you can't see it.

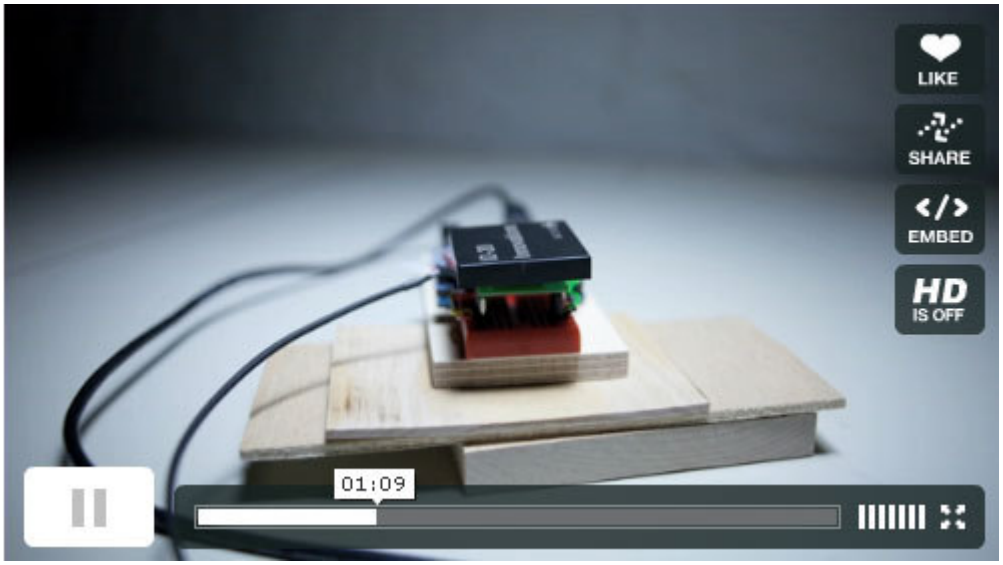
So says designer **Timo Arnall** of Oslo, Norway, who conducted a unique experiment published on-line this month to help visualize the interaction between RFID readers and tags.

We'll let the pictures tell most of the story.

Arnall, along with partner **Jack Schulze**, first mounted an RFID reader and captured a still photo shot of the reader position.

The key point is just that it is important to understand this reader-tag interaction – and that for challenging applications, such a visualization effort might in fact prove very useful.

Next, Arnall connected an RFID tag to an LED wand in such a way that whenever the tag was



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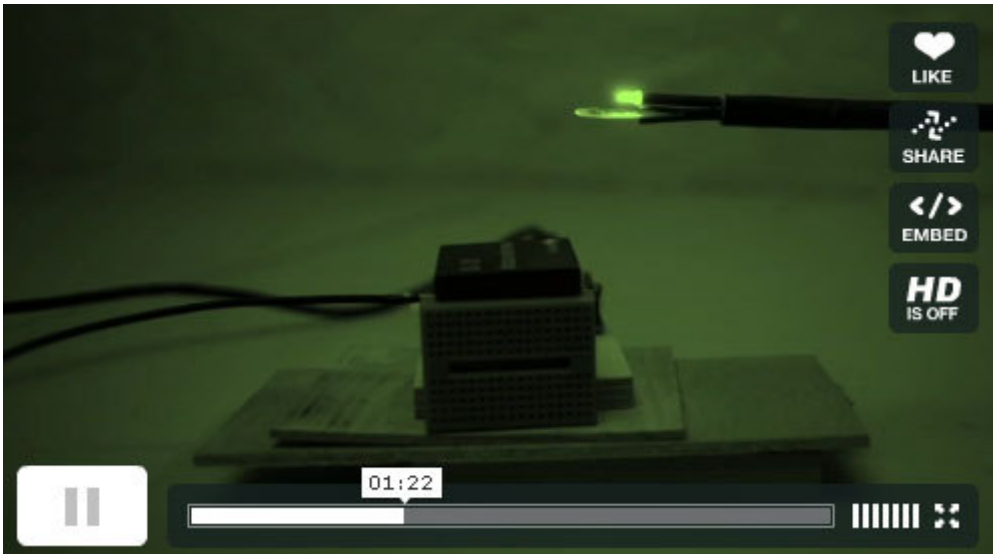
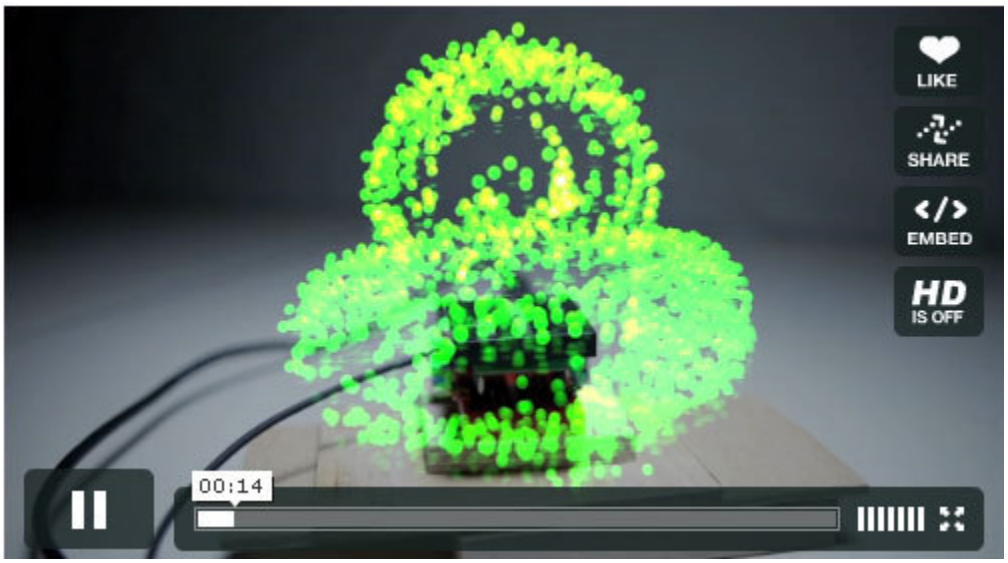
picked up and charged by the reader, the LED wand



would briefly turn on and emit a light beam.
By moving the wand around the reader array and triggering a camera to capture an image when the wand turned on, Arnall was able to capture visually what the read field looked like by superimposing those LED



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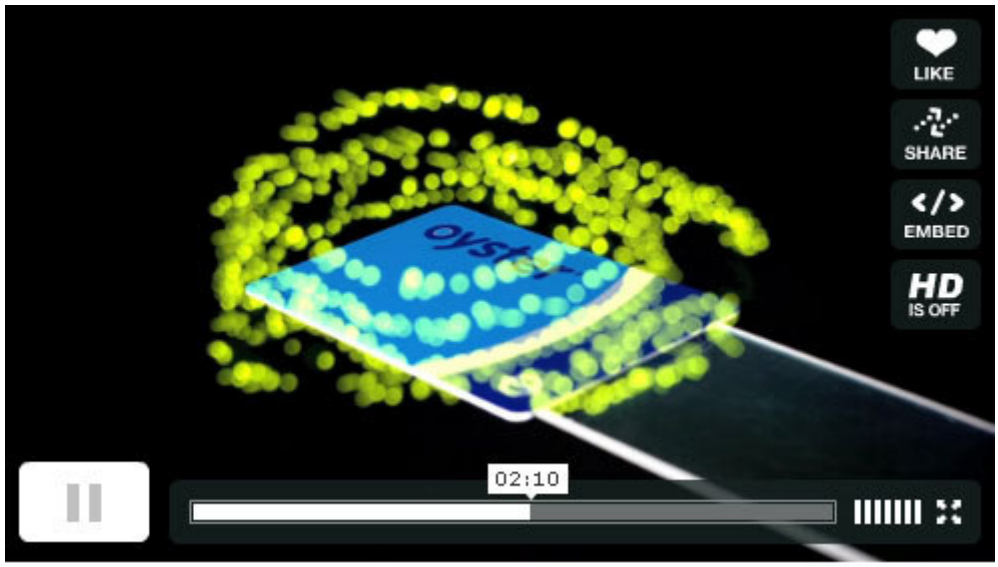
emissions over top of the original still image of the mounted reader, as shown below.
The key point, Arnall points out, is that this visualization is not of the reader field itself, but rather of the reader-tag interaction field. Different readers and or different tags could present a different interaction field. In fact, Arnall and Schultze repeated the experiment using a different type of reader and antenna, and achieve a very different visualization pattern.



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To see the complete video, go here: **RFID Visualization Video**.