

Telematics Trendline

Following the Growth of Automotive Telematics

By Derek Kaufman, C3 Network, Inc.

Telematics Trendline is a series of monthly articles by Derek Kaufman, C3 Network, Inc., designed to inform AAIA members about the trends in telematics applications for both the retail automotive and commercial trucking industries. For the full December article, or for more of the series, click [here](#).

This month:

- **The Fabrication Revolution**
- **3D Printing**

As your Trendline editor writes this month's edition, the Occupy camps across the country are entering their winter months. Unfortunately, we are closest to the Oakland event that is moving from drum circles of discontent to murder in the streets. Watching these events makes this final edition of 2011 all the more relevant – because we speak this time about America's ability to make things and control its future.

We are concerned for our country. You may be on the side of the protestors railing against Wall Street's manipulation of the government and their bonuses financed from our pockets. You might think that the federal government caused this mess by trying to redistribute wealth through forcing banks to make unsustainable home loans. Regardless of where you stand politically, the truth is that Washington is broken and the Occupy folks and the Tea Partiers actually have a lot in common – they are both tired of a government that is no longer effective. America has no energy policy. Our debt is unsustainable. Our education system is not world class. We are over regulating the people who create jobs and under-regulating the people who simply trade other peoples' money. Meanwhile, we are outsourcing the jobs, the brain-power and the innovation that has made this country great and reducing our freedom in the process.

There are days we panic and think that we have actually created an American society that no longer offers a better future to its children. But there are other days that tell us that the American spirit is alive and well. Tattered maybe. Tired of being suppressed by the political class certainly – but alive and well nonetheless.

In this last edition of 2011 we stand up to celebrate that spirit.

The Fabrication Revolution

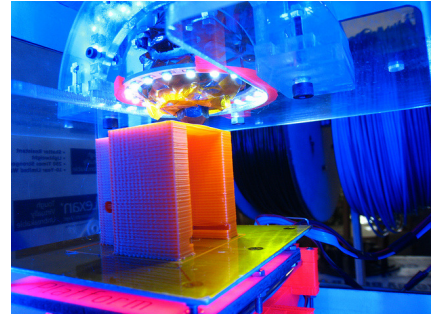
Back in 2007, Professor Neil Gershenfeld of MIT's Center for Bits and Atoms talked about the "fabrication movement" as he introduced FabLab at a TED conference. He started his talk with the statement "The digital revolution is over – we won," and then went on to explain how the next big change in world markets will be driven by the new technology of making things.

<http://www.youtube.com/watch?v=5n-APFrIXDs>



“Give ordinary people the right tools, and they will design and build the most extraordinary things, “ is the motivating idea behind Fab Lab (<http://fab.cba.mit.edu/>). We heartily endorse the movement.

If you want to see the celebration of making things in person, attend a Maker Faire event in the Bay Area, Detroit or New York next year. Yes, the Faire replicates every weird science experiment ever done in a high school (only amplified by Arduino boards, LED's, Infrared emitters and detectors, and high voltage power packs). But, inside the craziness lies the next idea for automotive telematics, energy generation, vehicle propulsion and robotic service. What we like about the Maker Faire events is that they deal with hardware – not just software. They are about things you make.



The Maker Faire site itself is at <http://makerfaire.com/>. Spend some time running through the videos showing IC boards being made, or the science behind fiber optics. <http://www.youtube.com/watch?v=aRKYjnBDxUg> You can also check out Make Magazine -- <http://makezine.com/>

Finally, to show that the fabrication revolution is catching on not just on the techno-fringes but also in the established mainstream, we invite you to Fayetteville, NY. (population 4200) where the public library is being converted to an innovation incubator filled with Makerbots and other tools to allow people to prototype new ideas. <http://tinyurl.com/7vxxdol>

What's a Makerbot? <http://www.makerbot.com/>

3D Printing

One of the key drivers of the fabrication revolution is 3D Printing. From the introduction of the first stereo lithography machine to today's affordable plastic and steel medium printers, the ability to convert CAD drawings to working devices with moveable parts from a single printing process is both amazing and exhilarating. Here are some interesting links:

Urbee



<http://tinyurl.com/czben2g>

- Printed Velcro fasteners
 - <http://www.thingiverse.com/thing:12798>
- A full size 3D printed car (www.urbee.net)
 - <http://www.ubergizmo.com/2010/11/worlds-first-3d-printed-car-actually-works/>
- The future of the medium
 - <http://video.forbes.com/fvn/future-tech/autodesk-on-3d-printing>
- Jay Leno makes it real
 - <http://www.jaylenogarage.com/video/nextengines-3d-scanner/944641/>

We built the US economy on technical innovation and making things that other people around the world want to buy. Over the last 20 years we have outsourced much of the manufacturing in that equation and our economy is feeling the loss of those solid middle class jobs. Maybe the Fabrication Revolution will bring them back.

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