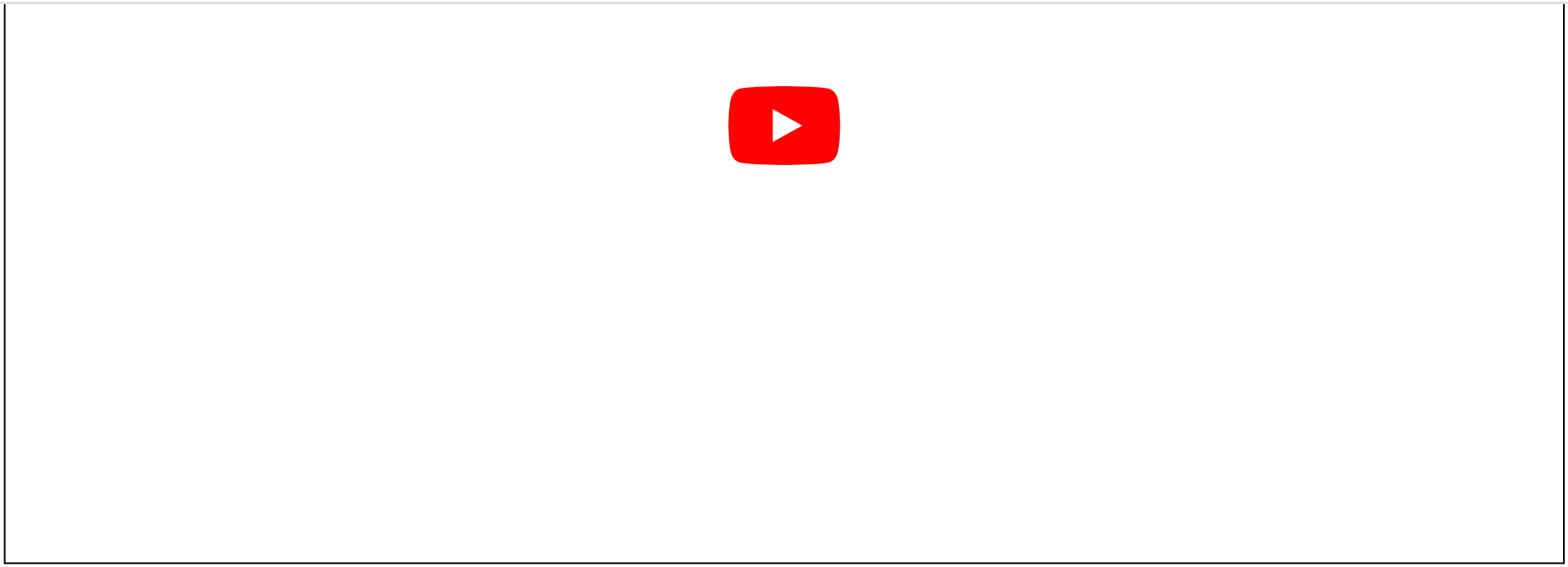

In the mid-1990s, I led the industry/academia team at General Motors that built the world's first collaborative robots. It was hard work; most people even in robotics had not heard of a "cobot" (or, "intelligent assist devices" (IADs) as we referred to the broader category), knew what it was, much less how it could be useful.

Our academic partners-in-crime, Northwestern Professors Michael Peshkin and Ed Colgate, founded Cobotics, Inc. (renamed CoMoCo, for Collaborative Motion Control, Inc.), the first startup in the cobot market, in 1996 while UC Berkeley Professor Hami Kazerooni went on to found Berkeley Bionics, renamed Ekso Bionics, later on). By the time I left to head back to the Valley and co-found the social networking pioneer Spoke

That's what makes this week's news about **Rethink Robotics closing its doors** such a shame, but it doesn't come as a surprise. As I learned first-hand at Spoke, and as anyone who has worked in the startup world knows, it's a hard road. And even after many successful years, companies can fail. Especially when you're trying to define a category – to prove the value of a technology that has yet to be seen by the vast majority of your audience – the roadblocks are many, and the folks who emerge as victors are few.

Still, there are several takeaways we in the world of manufacturing automation can glean from Rethink's journey, and use to help drive our own successes to the benefit of everyone in the factory:

Humans still run the show, and will for a long time

Despite the benefits that robots can bring to a factory floor, 90 percent of tasks are still done by humans. Machines simply don't have the dexterity, cognition or adaptability to manage those tasks. And that means manufacturers still need people and have a blindspot when it comes to operations and data, unless they can find a better way to measure actions performed by humans. The need for cobots and IADs persists.

Rethink Robotics Baxter robot. (Credit: Rethink Robotics)

Augmenting and digitizing human tasks is key, but squarely in Industry 4.0's blindspot

Because humans will continue to be an important element of the factory floor for the foreseeable future, true digital transformation relies on

empowering manufacturers to better understand what's happening on the factory floor – including the tasks that humans do.

There's an ever-present need for startups to be focused on solving real (manufacturing) problems

As I look back in cobot time and compare that with where we are in the world of AI, **Frank Chen's notion of "narrow AI"** resonates. The simple thought is that when you are creating a new technology, you want to pick the vectors that promise to have clear and measurable impact on your customers while solving the most critical problems. And, by solving these often narrowly defined problems, you build a revenue path ahead of you.

Viewing Rethink's products from afar, I always wondered if they traded off generalizability and stiffness for ease of programming and a human-friendly appearance. A point was often made by early adopters who were concerned that they couldn't accurately position the end effector, even with a relatively small payload, because compliance was introduced into the arm to make it human-safe. Leaving the core task of a cobot – of safely and precisely carrying payloads around – compromised. While the better-versed folks can comment on this hypothesis, what continues to be clear to me is that one has to solve clear and financially impactful problems to be viable.

It's never a happy occasion to see a promising company with pioneering technology fail, especially one where a very dedicated and smart set of people have worked so hard. Luckily, Rethink's end doesn't mean the end of innovation in manufacturing, and I look forward to an exciting future for all of stripes of Industry 4.0 startups (including Drishti) that are attempting to help companies harness and evaluate data from tasks their machines and employees execute on the floor. The potential to impact GDP and human lives is incredible.

Our thanks and best wishes go to the pioneering team at Rethink, whom I personally applaud for moving the world of cobots forward.

Editor's Note: *This article was republished with permission from* ***Drishti's blog***.

Comments

Paul Ranky

October 10, 2018 at 11:20 am

Thank you for your article, but respectfully I disagree with this statement: 'Viewing Rethink's products from afar, I always wondered if they traded off generalizability and stiffness for ease of programming and a human-friendly appearance. A point was often made by early adopters who were concerned that they couldn't accurately position the end effector, even with a relatively small payload, because compliance was introduced into the arm to make it human-safe.' The key reason, in my view, why this cobot company did not survive, is because of the extremely poor positioning accuracy and repeatibility. This should not be linked to any compliance issues, or making it safer. Actually, this poor positioning accuracy and repeatibility makes any robot or robot less safe! Best, Paul

Reply

William K.

October 11, 2018 at 3:57 am

It seemed to me that while the products were quite interesting, they were not able to deliver what the customers needed at the time. What must be understood is that when selling to the industrial production equipment market, there is no substitute for meeting the requirements for production equipment. Cute does not make it in that market. The customers will only buy what will work. And the only ones who will assure that a business is profitable are customers. Just because the press loves the product does not deliver any income.

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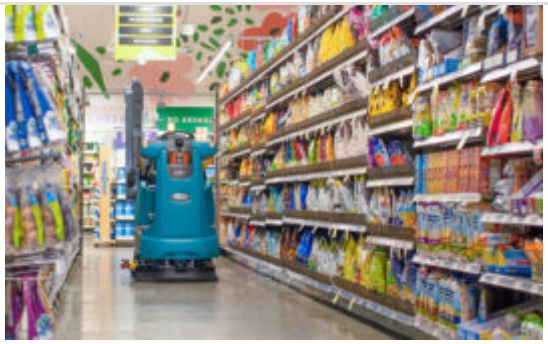

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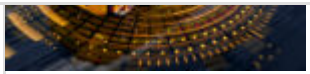

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