

Jan 2018 @ CTM

The Director Speaks - "Leading in a Fog"



This last month I had the honor of attending a Tech Mahindra Conference and the DataWest Conference. The conferences both had very different agenda's but in both conferences the issue of fog computing in an IOT space came up. It was not an issue of whether or not Fog computing will happen as it is generally accepted that some kind of Fog computing capability is needed. The question revolved around the idea that per application some functions are best performed in the cloud, some in the device, and some are best performed in the network (closer to the device than the cloud but not in the device itself). Complicating the matter is the fact that the location of this functionality may dynamically move over time; that is it might be closer to the cloud side of the network in light utilization situations and closer to the devices in heavy utilization situations. If one were to put the needed functional component in a fixed location, it would not be able to gracefully serve the ubiquity of a changing market. In our quest to act as market leaders, how would one build IOT devices, applications, and networks for an environment that will, by its nature, be constantly changing? While these specific comments came up in the context of an IOT conversation, the same question can be generalized and asked about other environments (e.g. gaming, entertainment, and even medical environments). I believe the question is profound and much more thought and attention are required. However, what we can say today is that those that are developing solutions that are based on a functionally fixed view of the environment are providing stop-gap solutions that will need to either evolve as demands change or fade away. Maybe that same lesson is something that can be applied on a much grander scale, maybe it should be applied to everything we do?

UPCOMING EVENTS

- Jan 19, 2018. [The USC 2018 Innovation Coast Conference at the DoubleTree Hilton in Culver City.](#)
- March 2, 2018. [The Business of Entertainment's E2 Conference at USC \(The future of screens\).](#)
- March 22, 2018. The Los Angeles Cyber Security Conference 2018 at the Airport Marriott.
- May 7, 2018 A SmartCities conference on Accelerating the Innovation Economy in Santa Clara.

If you have an event that you would like us to include in our newsletter, please send an email to ctm@marshall.usc.edu

IN CONVERSATION WITH EDEN CHEN, Founding Partner at Fisherman Labs



1) What makes Fisherman Labs different?

Fishermen Labs focuses on creating great digital products and experiences. We believe that there has already been some major market shifts: consumers expect much more from companies when it comes to the user experience of the digital products they use, technology is rapidly changing, and the companies that have both great content and platforms are the ones that are succeeding the most. Most agencies nowadays focus exclusively on marketing, whereas we focus on the product and the experience. We hire the best product managers, designers, and programmers that are able to quickly adapt to the changing environment and create something that not only looks great but that functionally works for millions of users from a design and technical perspective. We believe very few agencies have the know how to do these things well.

2) Where does VR/AR and data science/artificial intelligence overlap? Are you looking for some significant breakthroughs in the next couple years? Please explain why

One of the main barriers of the long term success of AR is watching the evolution of the computer vision industry, or the ability for a computer to see anything and interpret what it is and what to do. This will happen eventually and there have been some tremendous strides in this area over the last couple years but there is an overlap between computer vision and data science. In order for the computer to process that amount of data, we also need to see strides in data science as well - computers need to be able to see patterns and make connections quickly.

3) What kinds of challenges did you have to overcome to encourage adoption of VR/AR by your clients?

As with any investment, clients always want to know what the ROI is. We're always balancing a tight rope between being a R&D firm that focuses on technologies that may not have use cases today, but may in the future, and product development of technologies that launch and are expected to have ROI today. We believe companies need to do both of these (see the book *Innovator's Dilemma*). In order to get past these challenges, we're trying to convince companies that they need to invest in the future, and at the same time, showing them the applications today for a given technology. There are VR applications today that we know are effective, they just may not be the ones that the masses are thinking of. So we have to look at both the near term and long term applications of a technology.

4) Customer experiences are changing. What kind of experiences do progressive companies want for their consumers today? How has VR/AR helped that happen?

I think that what companies have wanted to do hasn't changed and that is to get their product in front of customers and to convince them to buy it. Customer experiences change because technology enables them to do more, faster, and in a different way. Progressive companies need to see technology as an enabler for them to do what they always have done. VR and AR is just another medium for this. VR allows companies to give consumers a fully immersive view of something they want to sell.

I strongly believe that AR will be the next medium post mobile phone. This isn't going to happen overnight but in an AR driven world, we'll be able to layer user experiences and products everywhere in the physical world and this will create an even pickier consumer on great interfaces as they are inundated with even more information.

5) How is AR/VR changing our understanding of "branded" marketing?

I don't think there's been a huge direct impact on branded marketing yet, but there is a trend that we are seeing where branded marketing is dying. Young people don't seem to care as much about brands as they do great products. VR and AR gives companies even more of an opportunity to show the difference between their product and a competitors because of the immersive nature of both, and this is more important than ever because brands aren't as powerful as they used to be. I would say the biggest place that I see movement in with AR branded marketing is in Snapchat. Snapchat is by far the largest consumer adoption of AR as of yet and is a sign of things to come. Companies need to start investing in 3D assets and content that users will be able to interact with like the famous dancing hot dog. It's not enough to just have video, the 3D needs to have some level of interaction.

THINKING AMP: Why Transformations Matter



Everyone knows about Charles Darwin and his famous expression, 'survival of the fittest.' But he never actually said that. Another man, Herbert Spencer, did, after reading Darwin's *Origin of Species*. So, while Darwin didn't utter those famous words, *Survival of the Fittest*, but he DID say something that is at least as important. The quote I'm thinking of is this: *It is not the strongest of the species that survives, nor the most intelligent. It is the one that is most adaptable to change.*

Years later, Jack Welch, at the time the CEO of General Electric, repeated that message when he said, "Destroy your business—change or die. When the pace of change outside the business exceeds the pace of change inside the business, the end is near." Today, we're going through a period of wrenching and uncomfortable evolution in business. Just look at the number of industries that are being innovated out of existence. The online world is wreaking havoc on traditional storefronts. Uber is changing the domain of public transportation. AirBNB is changing how and where we stay when we travel. Apple reinvented the music industry, possibly saving it from itself. Netflix changed how video entertainment is delivered. And Amazon? Well, starting at the supply chain, they redesigned *everything*.

What these changes really reflects is the growth of what are called knowledge economies. Knowledge based economies grow much faster than traditional labor or capital-intensive economies, since they don't need much in the way of capital infrastructure to get started. This is the single biggest and most transformative force reshaping businesses and societies that we've seen in a long time. Its power comes from four things: collaboration; trust; knowledge-sharing; and a clear recognition of the difference between control and influence.

People can generally be categorized as having either a competitive mindset or a collaborative mindset. Today's business culture is largely made up of people with a competitive mindset. Yet, if we look at the most successful individuals and companies out there, we find that they owe their success to their willingness to collaborate to achieve their goals. In effect, they are personally willing to be transformed, willing to establish a new behavioral status quo based on the idea of giving up control to gain influence. The competitive mindset is all about self—it's about doing everything possible to win, and usually at all costs. Frankly, it's a primitive, unsophisticated way to engage because it takes the focus away from creating solutions for the customer and puts the focus on maximization of personal benefit. Collaboration, on the other hand, requires a high level of trust, it is a much more sophisticated way to engage. Albert Einstein got it; he once said, 'Nobody is as smart as everybody.' The collective skill, knowledge, intelligence and capability of a group of people will always outperform an individual, as long as all players operate under a model of mutual trust, cooperation, and shared knowledge.

So, what does this thinking mean when we apply it to technology? Digital Transformation programs are intended to allow a company to use digital technology in order to deliver a level of service quality that up until now has been nothing but a distant dream. Some people would say that Amazon is killing the traditional, brick-and-mortar retail industry. The reality is that Nordstrom, a brick-and-mortar store is doing just fine because they understand that it isn't Amazon's Internet presence that is so damaging; it's the fact that Amazon understood the customers are evolving to expect a different kind of customer experience and Nordstrom's is working to use technology to change the experience it offers its customers. Nordstrom is using technology to work with its customers collaboratively and it is using technology to work with its partners collaboratively. This is a digital transformation that has impact up and down the Nordstrom value chain. Technology isn't the threat: failing to be customer-centric is. And that, you can take to the bank.

READINGS FROM THE EDITOR'S DESK

- We don't normally like the annual forecasts that appear like clockwork at the end of the year but this article says big data needs to evolve to test data veracity (data validity), become more prescriptive in nature, evolve from cost center to revenue generator, and shift to become integrated with other job functions. [Top Analytics Trends in 2018](#)

- We have long held that IOT solutions that pair devices with applications in a silo based architecture are myopic incarnations of early market programs. This article provides elaborates on the need for an expanded and more systemic view of IOT. It is important to think about IOT as part of the network infrastructure where devices can be accessed by any application and applications can access a system of IOT devices. [USC, Los Angeles IoT Consortium Takes Shape](#)
- Researchers from HBR support the CTM view that corporate culture is a key differentiator for successful organizations. The way HBR describes the issue, different cultures can be examined along 2 vectors: how people respond to change and how they interact with others. The CTM perspective is that these interactions are based on networks and the largest driver of change is technology but in the end, the cultural differences determiner who the winners are. [The Leader's Guide to Corporate Culture](#)
- It is clear that electric cars are here and becoming more common every day. What is less clear is how long it will take that industry to complete its transformation. This article talks about progress in a number of key sectors such as: Battery cost, availability of recharge stations, power train costs, psychology, and societal impacts. Progress in each area is accelerating and that implies the overall evolution toward electric cars based society is also accelerating. [What Needs to Happen Before Electric Cars Take Over the World](#)
- Industrial IOT is often considered the first wave of the IOT revolution because a single IT department can manage the overall roll out of this technology. As companies develop greater strength with IOT, the technology will be further integrated into products as a standard feature. These IOT centric products will produce a wealth of data that allows companies to consider new business models that are much more operational in nature. These next generation business models will allow product costs to be aligned with customer value realization curves. Ultimately, IOT will begin to reshape strategies to allow service enhancements to become a valuable component of the offer. [With IoT, any company can enter the SaaS market](#)
- This article, "12 Characteristics of Strategic CEOs" was interesting because it suggests that stellar leaders accept that markets are constantly changing and as a result, the employees continually have to be encouraged raise the bar. The characteristics are more about actions a CEO might take to give their employees a vision that is bigger than today's business, a perspective that accepts that there will always be uncertainty and risks that have to be addressed, and an eagerness to always be leading the charge toward the next hill. [The 12 Characteristics of Strategic CEOs](#)

REACHING OUT

Please feel free to forward this email to your friends and colleagues who you believe would benefit from participation in the CTM community. For those of you who wish to be included in the CTM family of people who believe that technology is a tool and success is achieved by skilled wielding of the tools available to us, you can [join the CTM family by registering at our site](#). If you have suggestions, topics you want to see included in future newsletter updates, or other general inquiries, feel free to email us at ctm@marshall.usc.edu.

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Got a Business Research/Strategy Need?

The CTM team is dedicated to working with its member companies to better understand the increasingly dynamic business world in which we live. We believe that companies must lead in order to prosper in a world where the threats and opportunities facing us are constantly evolving. Fee free to reach out to the CTM team at ctm@marshall.usc.edu if you would like to start a conversation.

ABOUT CTM

Founded in 1985, the Institute for Communication Technology Management (CTM) is the world's foremost institute at the intersection of technology and content and represents a powerful network of industry leaders involved in every facet of the digital media value chain. For more about CTM go to marshall.usc.edu/ctm.