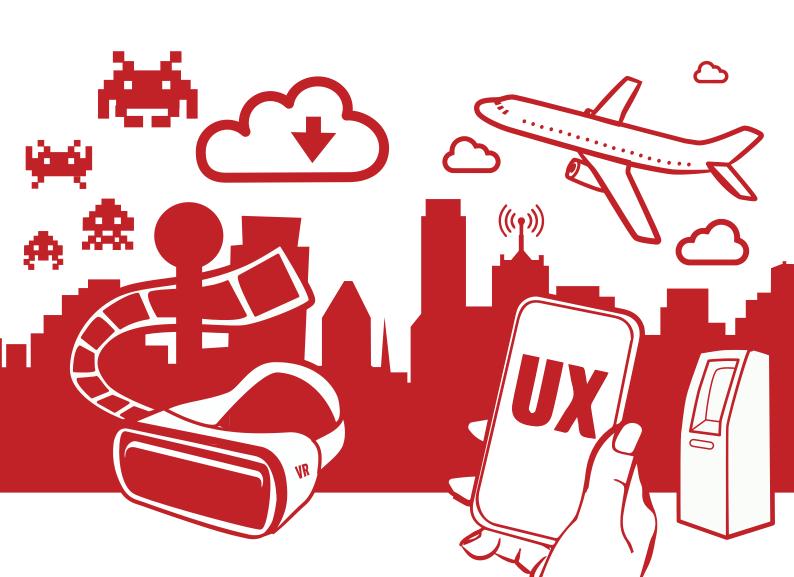
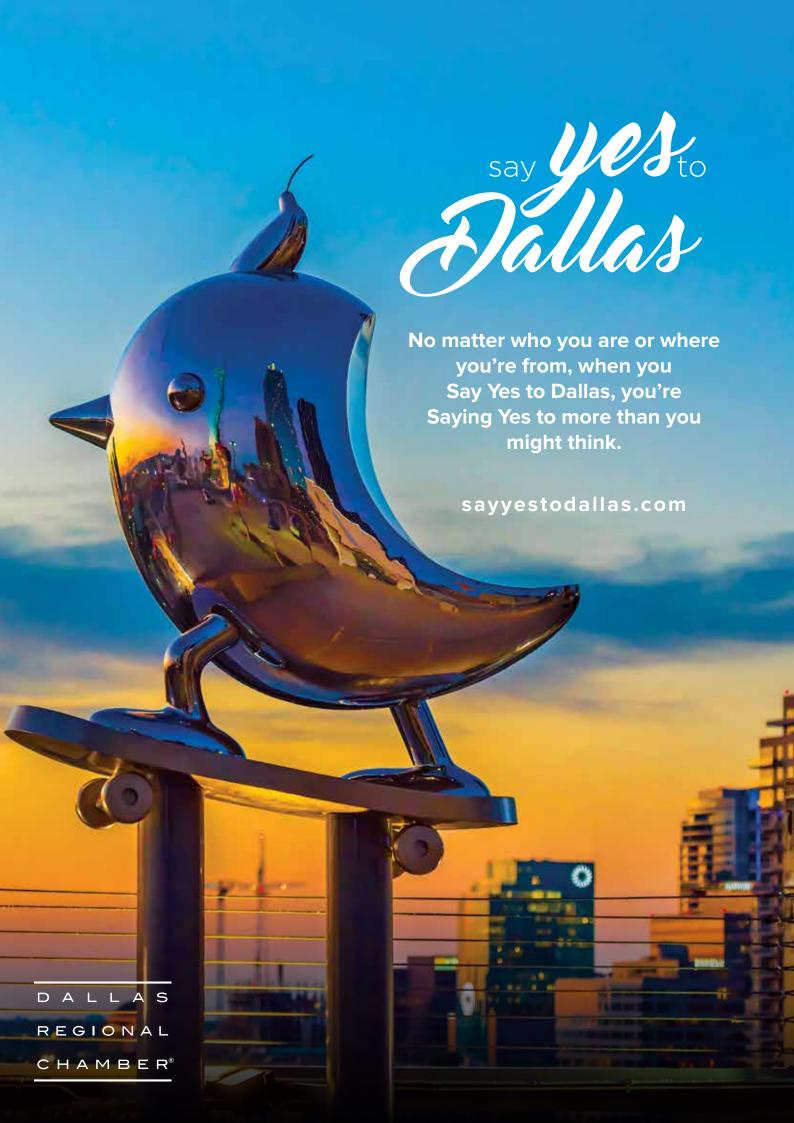
# DESIGN WITH A BIG

THE STATE OF UX/UI IN DALLAS-FORT WORTH





# CONTENTS //

2018

### WELCOME

FROM THE DALLAS REGIONAL CHAMBER

The Dallas Region provides a unique user experience. We're growing faster than nearly anyplace. We're largely a region of migrants —both out-of-state and out-of-country — and our collective mindset is to think differently.

Our workers are employed in one of the most diverse economies in the nation, by companies quickly adopting the notion that the consumer economy is being replaced by the experience economy.

Because we're early adopters and unabashed competitors in the marketplace, companies in the region are hiring professionals with user experience skills at a breakneck pace. Corporations and universities are encouraging students and workers to use design thinking in reimagining how problems are solved. Companies are being created and grown here, bringing fresh ideas that others look to follow.

There's no doubt that DFW is quickly becoming a hot-spot in the country for experience design talent and companies. We are excited to share this report on the scope and depth of the DFW UX/UI industry and look forward to what comes next. It is in fact, an exciting time to experience life in the Dallas Region.

> **Duane Dankesreiter** SVP of Research and Innovation Dallas Regional Chamber

WRITER DAVE MOORE //

COVER ART J. SHUH //

#### **ABOUT** THE DALLAS REGIONAL CHAMBER //

#### DFW EXPERIENCE

Nearly 16,000 professionals with user experience skills are changing how things are done

#### I LEADING THE WAY

Leaders in design thinking and user experience are based in the Dallas region

#### CORPORATE BY **DESIGN**

Global companies are rethinking how they interact with customers





#### THE EXPERIENCE EXTENDED

Companies are using AR/VR to enhance experiences and connect to users

#### A LOOK INTO THE FUTURE

Area universities are helping create a powerful pipeline of future UX/UI professionals

#### BY THE NUMBERS

The Dallas Region ranks among the top places for its UX/UI workforce

#### RESOURCES

Opportunities abound in the Dallas Region to learn, network and grow professionally

The Dallas Regional Chamber is one of the most established business organizations in the nation and serves as the voice of business and the champion of economic development and growth in the Dallas Region. We work with our 1,100 member companies and regional partners to strengthen our business community by advocating for pro-growth public policies, improving our educational system, attracting talented workers from around the world, and enhancing the quality of life for all. Our goal is to make Dallas the best region in America to live, work, and do business.

## **DFW** EXPERIENCE

EVERY COMPANY IS AN EXPERIENCE COMPANY

Nearly 16,000 user experience (UX) professionals have made it their business to improve living, working and doing business in the world.

Pulling money out of the ATM.

Paying for a restaurant bill or going to the movie theater.

Shopping for a car or even cutting one's lawn.

We are the accumulation of our everyday experiences. How we interact with products and our environment often dictates our likelihood of repeating that particular act. Recognizing that fact, companies are expanding their workforces to include user experience professionals who specialize in creating positive interactions with consumers, employees, and customers. Today, four out of 10 Texas user-experience professionals work in the Dallas Region.

Nearly 16,000 men and women (and counting) spend their days sniffing out the friction or humdrum of day-to-day life or once-in-alifetime events, and rack their brains to replace dread with ease or even wonder.

Some work for banks; others work for airlines; others, for defense contractors; still others work for watchmakers or the countless other companies that call the Dallas Region home. Others are just looking for a good problem to solve, or a boring routine they can turn into a game.

They've found themselves in the sweet spot of an exploding industry. The number of help-wanted ads has plummeted for workers who fasten bumpers onto auto chassis. Now, there is an insatiable demand for problem solvers – particularly those with digital skills.

Arguably, all companies are user experience companies, whether they're selling smoothies or subleasing office space. The complexity of the Dallas Region's economy guarantees a healthy mix of challenges to resolve and experiences to enhance. And steady work.

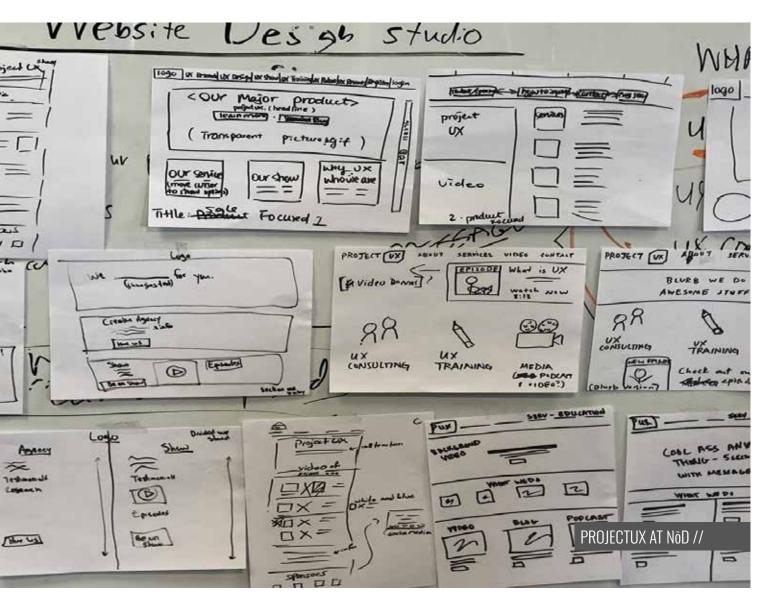
"Companies in the Dallas Region have been on the bleeding edge of adopting the customer experience approach to doing business," says Diane Magers, CEO of the Customer Experience Professionals Association, whose primary mission includes building bonds between customers and companies. Forty-two major corporations – Microsoft, Adobe, etc. – have joined since the organization started in 2011, she says.



#### INDUSTRY HIGHLIGHTS //

- Hungry for User Experience designers Compared to similar-size metros, businesses in the Dallas Region are hiring more UI/UX designers, and are paying them more.
- Omnivorous consumers of UX
  Designers in the region are employed in the commercial aviation sector, the retail industry, financial services companies, logistics/transportation companies, and others.
- Group (design) thinking

  More than a dozen associations, events,
  and programs have sprung up in the
  region, helping designers brainstorm,
  commiserate, learn, and hone their
  skills.



#### UX Looms Larger in Big D

One particular aspect that's played a bigger role in this is digital and data interactions, such as through apps.

"Part of the reason is that companies that are relocating to the Dallas Region are hungrier for success," Magers says. "A majority of those 42 companies in the (Customer Experience Professionals) association have a strong presence in the Dallas Region."

EMSI labor market analytics writes: "Dallas-Fort Worth-Arlington, Texas, is a hotspot for this (UX designer) kind of talent," estimating that there are more than 27,000 user experience designer positions in the Dallas Region – nearly a third more than the average metro of similar size. The number of UI designer positions in the region lags somewhat, at more than 7,300, compared to 8,400 in the average, similar-size U.S. metro. Because workers sometimes do both UX and UI work, the actual number of workers can be hard to nail down.

A person's interactions in life have grown in importance in recent years. Where before, a user experience might have just described It's not just, 'Do I like that car?'
It also might be, 'What
was the experience like
when I tried to use that
feature?'
-Michael Courtney, Dallas

a website or app. Now, the concept extends to any point of contact with someone, whether they're a customer or an employee. Whatever form the interaction takes – be it a notification to a barista of how a customer likes her coffee or a cue to a store manager that it's time to order more French roast – the core motivation is empathy. Design thinking – which requires people to feel how problems impact people – is the framework for much of the work done in the user experience sector.

"It's not just, 'Do I like that car?" says Michael Courtney, a Dallas-based futurist and data-driven analyst who was involved in the decision to incorporate the first camera into a cellphone, at Nokia. "It also might be, 'What was the experience like when I tried to use that feature? Or set up that service?' The user experience/interface are (becoming) larger and larger components of whether they will like the product, or be loyal to it. The user experience these days drives whether I acquire or keep new customers."

That means design researchers such as Courtney often act as modern-day Jane Goddalls, observing their subjects, living among them, even setting up one-way mirrors to observe others as they try to use the tools intended to help them. Simply put, people in this trade must be empaths to feel the pain of what's broken; they must be science-driven to objectively remove the sand from the Vaseline; and they must be creative problem solvers.

The core element of design thinking then becomes a sort of a multitool, where design research (figuring out how to improve how things work) and the ability to incorporate software and data into the experience or solution, become key elements in giving companies a competitive advantage.

The result is that companies are calling in design thinkers and other players – even lawyers – at the beginning of the problem-solving or innovation process, to help guide the a conclusion that can become a reality. Or, if an idea is a non-starter, they can ferret out that possibility more quickly.

#### **Shared (Solution) Experiences**

The white-hot interest in all things user experience would seem a recipe for cutthroat competition and hard feelings among its players.

Not in the Dallas Region.

"The UX community in DFW is incredibly tight and friendly," says Brandon E. B. Ward, host of the ProjectUX webcast, which features developers and their newly launched app concepts. "Everyone's really chill and kind and willing to share their knowledge. No one hoards their expertise. They speak at meetups, workshops. We all support each other."

It would make sense that problem solvers would live friction-free lives as they set out to smooth the way for others.



Researchers such as Michael
Courtney often act
as modern-day Jane
Goodalls, observing their
subjects, even setting
up one-way mirrors to
observe others

# BIG DESIGN

STARTED ON A LARK, THIS DALLAS CONFERENCE HAS BECOME A CAN'T-MISS EXPERIENCE



// BRIAN SULLIVAN

# **DESIGNER**Big Design Conference Co-Founder

**About 12 years ago,** I challenged a group of local design leaders to put on a first-rate conference in Dallas. I explained that it made sense because we had so many connections to top talent, recruiting agencies, big brands, hiring managers, and great speakers. We started planning the next day.

Big Design was designed to be a low-cost, high-value conference experience. Our organizers were tired of expensive conferences, where attendees wait in line and are turned back at the door. We wanted our attendees to hear from different disciplines — development, user research, design, usability, filmmaking, and product management.

We believe the currency comes from the conversations: new voices, fresh perspectives, different disciplines, case studies, practical tips, and inspirational talks. We decided to put on the conference we wanted to go to. We end up working the conference, but our attendees tell us they love it!

**Every Big Design** has had international attendees. People want to speak here. One year, we had a power hour of speakers from Disney, Netflix, Amazon, Walmart, Pixar, Adobe, Sabre, AT &T, USAA, and Facebook.

**Our values center** on learning, sharing, and growing. We shine a spotlight on the Dallas

design community—our talent, our companies, our expertise, our city. The conference has grown every year. We are expecting more than 1,200 people this year; we started with about 500.

We have killer keynote speakers. We have had two Academy Award-winning artists. Phil Tippet, who created the Death Star and Millennium Falcon for Star Wars, and the dinosaurs for Jurassic World, was a recent keynote speaker. Other keynotes were leaders from Amazon, Facebook, Sabre, Spotify, Netflix, and Capital One.

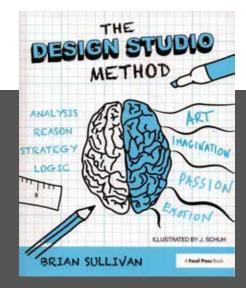
In our 11th year, the conference has moved to Gilley's Dallas to enhance the Big Design experience. We will have more than 80 speakers and 40 booths, and are hosting "An Evening with Stephan Martiniere" on Sept. 21. Martiniere is the top concept artist in Hollywood. His movies include "Star Wars," "Avengers," "Ready Player One," and "Guardians of the Galaxy."

Big Design Conference was the best kept secret (and dare) in Dallas. Until now.

#### BOOK NOTES

Design studios are sketching workshops, where key stakeholders produce sketches individually and critique them with a group. On the surface, design studios appear to be simple to do: sketch and critique. The single best thing you can do at the start of a project is a design studio. Yet, most people do not run very effective design studios.

Excerpt from "The Design Studio Method," by Brian Sullivan



USAA //



# **USERS FIRST**

## AN INTERVIEW WITH TATIANA MILLER // EXECUTIVE DIRECTOR OF DESIGN AT USAA

What do you do for USAA as executive director of design, and how you apply design thinking in your role?

USAA has three major lines of business; they include the Bank, Investments, and Property and Casualty (P&C) Insurance. In my role, I oversee design teams that are deployed against P&C experiences, and I lead teams in both San Antonio and Plano.

As Executive Director of design, my job is to develop and inspire designers, as well as to provide them with equal parts of autonomy and clarity to do their jobs. It's all about the people, and design thinking is a method of considering people's needs early and often in the process. So, I use design thinking almost every day, whether I am thinking about how to scale design or empower diverse teams to solve the right problems, align, and deliver value together.

I work with designers in two locations, San Antonio and Plano, and lead design teams that provide design services to our P&C division.

#### How many people do you oversee in your role?

In my immediate organization, we have around 60 folks. Altogether, USAA's Chief Design Office is close to 300 designers that are working across three design studios supporting our business priorities. Our largest population of designers is, of course, in our San Antonio headquarters. We also have a beautiful design studio right in the heart of Austin, and our third —and fastest growing studio— is here in DFW, located in Plano's Shops of Legacy.

#### What approach do you take in effectively overseeing/ managing so many creative professionals?

I am extremely lucky to have an amazing leadership team, who report directly to me and are laser focused on developing, growing, and supporting their design teams. At USAA, each Design Director and team is dedicated to a persistent business unit such as auto claims, property, or auto insurance. They work closely with our business and engineering partners to rethink and redesign member and employee-facing touchpoints. In addition to my direct reports, USAA has invested in creating a strong design support system to enable us to create value faster. We have an entire organization that is solely dedicated to supporting designers as we work with our business partners. As we focus on deploying teams to understand, explore, and define experiences for our members and



employees, our Practices Team is focused on creating, managing, and growing the tools and processes that designers use to deliver those experiences.

#### How did you arrive in UX design?

My journey into design was somewhat unconventional. Even though I have always been creative, my professional career didn't start off in design. In the '90s, I was working in the financial sector and that is what eventually landed me at USAA. Being a banker wasn't exactly what got me super excited. I knew that it wasn't my passion. Shortly after coming to USAA, I made a decision to completely redirect my professional path and move toward design. At that time, I worked full time, went to school to complete my design education, and tried to convince all of my friends and local businesses that they needed a website. So, when the opportunity came, my portfolio was ready... and the rest, as they say, is history. I am so grateful that USAA offers so many development and rotational opportunities to their employees.



How do you go about understanding end-user behavior? Are there any overlooked approaches that seem to work better for you? We talk to real humans almost every time we kick off a project. We always strive to deeply understand their needs to make sure we are solving the right problems for them. We use various methods to uncover those needs such as one-on-one interviews, co-creation sessions, and contextual inquiries. We ask lots of open-ended questions and observe. As designers, we know that often people might say what they think you want to hear. We listen to and watch how people behave. My advice to all designers out there is when you have an opportunity to talk to real people early in the process, take it! Bring your business partners with you. Ask questions and observe behavior. You never know, it could lead in an unexpected direction.

At what point should a company hone a user experience versus breaking the model pursuing something revolutionary (think Apple's 2007 launch of the iPhone, when Blackberry was integrating a nearly full-size texting keyboard for its phone)?

For me, it is difficult to divorce innovation from design and see them as two separate ideas. In my mind, the intersection between both is what propels us to deliver the best results for your business as well as your users. One naturally leads to the other. Companies should never neglect improvement of existing experiences for the sake of innovation. Striking that balance is key.

In recent years, we've seen many large companies differentiate themselves by investing in design to deliver more personal and frictionless experiences to their customers. At USAA, we use data, empathy, and design thinking as tools to translate ambiguity into something that is more tangible and clear. We also focus on experience optimization. Design offers us a unique opportunity to deeply understand our members' needs, and that understanding enables us to deliver the most relevant and innovative solutions no matter if it is a small improvement or a brand new idea. There are several studies out there that show evidence that design has a true impact on the business KPI's such as higher sales, customer retention, and faster product cycles. In my opinion, investing in design will lead your company to a greater understanding of your users. The deeper that understanding is, the better you are positioned for success.

## What problem/obstacle/achievement are you most proud of overcoming/obtaining in your UX career?

Our ability to design at scale. USAA is a complex system of touchpoints, products, and services. That complexity can be somewhat overwhelming but exciting at the same time for any designer. At USAA, our undeniable advantage is that we are obsessive about our mission and our members. We are all focused on delivering value through better pricing, products, services, and advice. And that includes all of us, from designers, data analysts, and system engineers to our business partners. We all know what it means to serve.

# AT THE HELM

Intuit VP of Design James Helm on the thinking that precedes formal design



#### JAMES HELMS

- VP of Design for Intuit
- Started in advertising in 1997 as an art director.

"I spent a good chunk of my career in print, billboards, and TV. That work got more and more digital."

• Intuit has embraced design thinking. Along those lines, Intuit hired former IDEO partner Diego Rodriguez, who describes Intuit as "designing-led, through-and-through." User Experience designers always start with empathy. We either go looking for problems to solve – or knowing what problems need solving. We use empathy to investigate those problems firsthand. We watch small businesses serve their customers. We watch accountants serve THEIR small businesses. We ask a lot of questions around why they do specific things: "Why do you put those papers there?" "Why is THAT important?" "What happens when you do it wrong?" And, "what's the bigger impact of THAT?" No question is a dumb question – and it's all about understanding all the motivations: where they're trying to differentiate (gains) for their clients and where they're afraid they'll fall short (pains).

We'll take all this raw qualitative data from a couple visits, and we'll generate themes. Ideas. Visuals that paint pictures of the processes we've observed. A lot of design work goes into visualizing "the invisible" thoughts, actions, and feelings that are muddled up with the work being done.

Then we'll come up with a pretty big 'aha' - the problem worth solving. And we'll do a little bit of extra definition around that: who has the problem? What are they trying to do? What is in their way? And why? And how does that make them feel? (Usually "afraid" or "anxious" or "unsure" or "terrified...".)

**Then we'll imagine an "ideal state,"** where that problem no longer exists; we reframe the problem as a solution state. That's our "creative brief."

Then the creativity kicks in. We'll come up with a ton of ideas around how to get to that ideal state. The bigger, bolder, and more far-reaching the better. We have to resist the tendency here is to go with the stuff that we could do tomorrow. Because the real magic comes from thinking about things that are HUGE and WAY OUT THERE. The ideas tend to be more interesting and demand more exploration. And they tend to force us to think differently about problem solving. The craft of designers kicks in here: we start to make story-boards and small prototypes (drawings, mostly) to illustrate these ideas.

Everyone on my team gets
multiple (recruiting) calls
a week; we retain them by
making sure we pay them
well, and feel empowered
to do the best work of
their lives.

- James Helms, Intuit





#### DON RELYEA

- Head of Design U.S. for BBVA;
   Head of Global Patent Office for BBVA
- Relyea holds 144 U.S. patents, with many still pending.
- Incorporated a 19-person core design team to BBVA Compass within a couple weeks

A Dallas native, Relyea is also an artist, composer, and electronic musician.

The addition of designers to global banking firm BBVA is introducing constructive problem-solving to operations across 35 countries.

## THE MONEY TALKS

TAKING USER EXPERIENCE TO THE BANK

Before Don Relyea and his crew rolled in, opening an account at BBVA Compass was a relatively slow, complicated affair. Sometimes tellers had to open up numerous windows in the process, increasing the chances for mistakes and delays.

This called for an intervention – front-line bank tellers were called to meet with engineers and experts in design thinking to resolve the issue. This was fall 2016 in Birmingham, Alabama, at BBVA's Brock Development Center offices. Relyea brought them together so they could talk through how the process worked and didn't work. At the end of the day – literally – together, they mapped out a plan that would ultimately reduce the time for opening an account by nearly 83 percent.

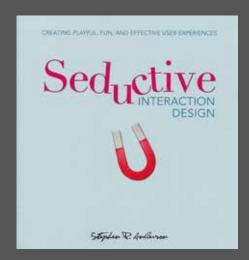
Like many professionals in the user experience industry, Relyea worked in a variety of industries, from Verizon to Barclays, among other stops, before arriving at BBVA Compass. ("We would sketch out prototypes and make tech real," he says, recalling his work at Verizon.) Yet, Relyea says he's proudest of his work at BBVA: "I'm finding myself more challenged and rewarded by the cultural changes that occur in the groups I interact with," he says. "There's a group of folks (on the team) who aren't used to design thinking, and they get excited about it. It's very rewarding."

Just as collaborative design thinking trimmed account set-up time by 83 percent, the practice can prevent companies from sinking fortunes into the execution of faulty products.

"We were doing work with Compass BBVA's ATM group, and they had all the vendors present," Relyea says. "We were sketching out these capabilities on a white board," he says, describing the design thinking workshop.

The team was just about to introduce an innovation to customers' automated teller experience, when suddenly, the lawyers present said the breakthrough would constitute a violation of regulations. They shut it down. Yet, the process impressed one of the executives in the room immediately.

"One of the ATM vendor CTO's present said, 'You just saved yourself a ton of money," Relyea recalls, adding that many company launches fail because they're not properly vetted.



#### **BOOK NOTES**

My second year (in teaching high school English), things began looking up. I cracked the code and figured out how to motivate students. I had lessons I could improve upon. And I started getting curious — what could the sciences teach me about how we learn? Most of what I read at that time could be classified as pop psychology – secondhand accounts of "brain science" studies. ... One particular study involved our sense of smell and memory. I had been reading Robert Jutte's 2004 book "A History of Senses," and I stumbled upon this interesting remark: "Our sense of smell is most directly linked to memory." Hmm smell and memory are linked. I began to think how this could be applied to some of our creative writing assignments...

Excerpt from "Seductive Interaction Design," by Stephen Anderson

## **CUSTOM BUILD**

Capital One's Stephen Anderson on the User Experience in DFW

The Acquisition of Adaptive Path, Strong Ties With Higher Ed Drew UX Thought Leader to Capital One's Garage Venture in Plano



// STEPHEN
ANDERSON,
Head of Design,
Innovation Garage
at Capital One

Were you born in the Dallas Region? Yep! Born and raised in Lewisville, Texas. Attended the University of North Texas.

#### How did you land at Capital One?

Capital One's acquisition of Adaptive Path and care for its customers were intriguing to me. I had several friends from the speaking circuit join Capital One who were genuinely happy in their roles, and at the Big Design conference in 2016, I had the chance to catch up with a friend working at Capital One in Plano. When a position opened up in Capital One's innovation space that aligned

well with my passions for learning and education at scale, I jumped on board.

#### Why is the Innovation Garage located in DFW?

Dallas-Fort Worth is a business powerhouse, and Capital One is excited to help galvanize it as a tech hub. Capital One has several innovation spaces, but Capital One's Plano innovation space was named "The Garage" for being a place where many start-up innovations have occurred and because it's the place where our auto business lives. We take pride in our "maker culture," where all associates are builders and creators.

#### How do you find your UX talent?

The Capital One Financial Services Design team has strong relationships with universities, both locally and outside of Texas, sponsors local events such as the Big Design conference, hosts meetup groups including Ladies That UX, and different leaders speak at local, national, and global events. Additionally, my boss, Jamin Hegeman, teaches as part of SMU's UX certificate program, and we just hired a former student from the program.

Care to discuss how you apply design thinking to your daily life? More than anything else, design thinking is a mindset. As such, it's hard to separate who I am — as a designer and human being — from the design thinking pedagogy. As a design-minded person, I see the world as it could be and not as it is. This includes empathy, but it's also about wrestling with complex, ill-defined problems.

#### RFTAIL // BEN JUDY // 7-FLEVEN

#### Head of User Experience

Ben Judy formed a new user experience team at 7-Eleven, taking the No. 1 brand in convenience retail from a UX team of one to a team of 18 designers and researchers in less than six months.



#### ENTERTAINMENT // MARTI GOLD // SIRIUS XM

#### Director, User Experience and Design, Connected Vehicle

Marti Gold is a UX leader with more than 20 years of enterprise-level design experience. She specializes in problem analysis, user interface and interaction design, rapid prototyping, and the development of corporate UX standards. Marti is the author of "UX Style Frameworks: Creating Collaborative Standards" released in September 2015.



#### PROFESSIONAL SERVICES // JEREMY JOHNSON // PROJEKT202

#### **VP** of Customer Experience

Jeremy Johnson has been working in UX and digital products for more than 15 years. Starting as a designer but quickly moving to managing and selling, Jeremy's scope of influence is now focused on moving organizations to experience-driven methods.



## DELIVERING SOLUTIONS

UX/UI designers and experts are integral parts of many company operations and span across almost every industry. The Dallas-Fort Worth region has no shortage of thought leaders who are helping create the solutions for some of today's most popular products.



#### TECH // RON DAGDAG // THYSSENKRUPP ELEVATOR Senior Software Engineer

Ron Dagdag is a Senior Software Engineer at ThyssenKrupp Elevator, where he supports developers with their Windows, Web, and 3D application development. On the side, Ron is a Hackster Ambassador and Littlebits Chapter Leader in Dallas where he organizes workshop events.



#### BUSINESS SERVICES // DEBRA GELMAN // AT&T

#### AVP, Digital Design & User Experience

Debra Gelman manages a team of designers and researchers who take a user-driven approach to design, using quantitative and qualitative customer insights to innovate and inform how products will look and function.



#### FINTECH // SYBIL MULOKWA // ALKAMI Manager, UX Strategy & Design

Sybil and UX designers at Alkami are user-centered to deliver products that make a difference, are easy, engaging, and delightful to use. Her team leverages the RITE methodology - so breakthroughs are more process orientated than product orientated.



#### FROM BURGER TO P177A

Think of North Texas resident Norm

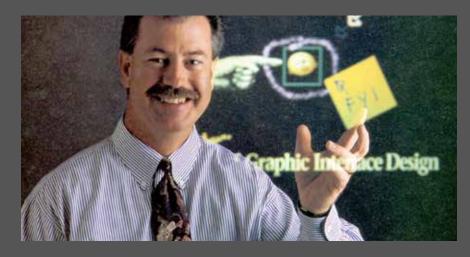
Cox the next time you tap to open the menu to pay for your Starbucks order on your smartphone or when you edit a Word document.

Cox was on the Xerox team that developed the graphic interface systems that we still use today – they literally built the desktop environment that we use every day.

But nowadays, if you ask Cox about what challenge he's most proud of resolving as a user experience professional/design thinker, he'll tell you it was the work he did for Pizza Hut

"Pizza Hut asked me to redo the instructional material for making pizza," Cox recalls. "I asked what's the root problem? Half the pizzas were incorrect or out of spec."

Cox entered Empathy Mode and before long, made two realizations: Pizza Hut's menu was so complicated; and the corporation's incentive model was not properly structured.



"If you looked at the sizes of pizzas, dough types, extra toppings, there was like 1.5 million permutations," he says. "That gets complicated for a high school kid who wants to work on the weekends."

The second revelation came to him late at night, when he was doing field observations.

"We were sitting in a (Pizza Hut) restaurant one night, and a manager knew an order was wrong but sent it out anyway," Cox says. "We took him out for a beer at the end of the night

and asked him why. He said, 'If I don't think a customer will notice, we'll send it out; if we don't (and remake the pizza), we might get dinged for our end-of-year bonuses for using too much material; corporate knows how much materials we should be using."

Cox drew up his recommendations, which included pairing down menu offerings and changing management compensation incentives. Cox projected that Pizza Hut could save \$400 million annually.

## NORM COX: ICONOCLAST

CREATING A LEGACY IN DESIGN

Q. Was there anything you developed – the folders icon, the hamburger icon, etc. – that you collectively looked at and said, 'We've really got something here.'

Norm Cox: If you think about this, personal computing has only been around for 40 years. I think it's a testament to the incredibly smart people who worked at PARC (Xerox' Palo Alto Research Center) and who applied design thinking skills.

We didn't know exactly what might come of this work we were doing. In that culture, in California in the '70s and early '80s, people wanted to share everything they designed and did. There was no notion of intellectual property. You wanted to show them, 'Look what I did'. Later, people started copying things and making money on them.

Q. How did you come up with these icons, with little to draw upon, in terms of precedent?

**Norm Cox:** There was nothing to compare to them. There was no prior work. We thought, 'What do people already recognize? One thing we noticed was simple highway signs.

Those were easy to understand.

They were very efficient. Given the constraints of black and white displays of 72-pixels-per-inch, simplicity drove a lot of our designs.

You recognize things by their shapes. Think stop signs. We looked for principles in the real world that we could put into computer screens. If you look at the (original Star Workstation demo) video, you'll see the very simple style. After several years, it went back to that simple style again.



#### **BOTTLE ROCKET // DISPLAY**

#### Open office, open minds

Team members at the Addison office of Bottle Rocket display their work on floor-to-ceiling whiteboards to invite collaboration from peers. Clients are engaged in the development process as projects take shape.



#### WALMART // TECH

#### Smooth (store) operaters

Walmart Technologies in Plano is putting its vast troves of data to work to help improve the workings of thousands of retail outlets across the world. Leaders see a variety of opportunities, from invoicing to quality control.



#### **REALPAGE // INTERFACE**

#### The complete package

Developers at Richardson-based RealPage write software that helps manage nearly every aspect of rental real estate experience – from collecting rent, to budgeting, to legal compliance.

# CORPORATE

From retail to data services, companies are putting users first

Companies in the region employ thousands of professionals to gain a competitive advantage that comes from looking at the experiences that companies deliver to their clients, employees, and to consumers. Many of them also look at ways to integrate digital versions of these people (avatars) into their business plans, to serve them more effectively, and to increase interactions (and transactions) with them. As one might guess, a lot of work, creativity, and thought can go toward making that journey. How does that happen? Often, with a single step.

#### Bottle Rocket: Design with Clients, Work Publicly, Build Quickly

"The first thing we do with clients, we do discovery sessions with them," says Michael Griffith, who helped develop the first apps for Bottle Rocket and its founder – Calvin Carter. Bottle Rocket produced apps for a then-new device called an "iPhone."

"It's five to 12 stakeholders," he says. "They could be the person who owns the brand; it could be marketing person; definitely an IT guy. There's collaboration there; beyond that, we collaborate with our clients daily."

Griffith says Bottle Rocket used that process, working with a hotel corporation, in developing a "journey map" – a timeline that focuses on a specific customer's interactions with a product or service. Bottle Rocket collaborated with its hotel client to build two types of travelers – or personae – to examine a day and a year in the life of a business traveler and a leisure traveler. The process includes user experience research: What have vacationers or business professionals experienced in their past travels? What frustrations did they experience? What opportunities remain for moments of joy or surprise?



#### **ACCENTURE // FJORD**

#### Virtual (Reality) success

Accenture design and innovation arm Fjord has built VR apps that train workers to build sandwiches and machines. Whole Foods 365 (coming soon) allows shoppers' smartphones to find items and to locate gourmet pairings.



THOMSON REUTERS // AI

#### Harnessing years of data

Thomson Reuters is putting its market intelligence to work, applying artificial intelligence, machine learning, and decentralized ledger technology to serve its clients.



#### SABRE // GOING PLACES

#### Developing the joy to travel

Roughly 60 developers build and maintain apps such as TripCase (for business travelers); online ticketing sites for smaller airlines; and PropertyHub, which helps manage hotel ops, e.g., check-in and checkout.

# BY DESIGN



We were really interested in how you can take AR (augmented reality) and create a better user experience. It's visualization that makes your life easier. — Paige Maguire, design director at Fjord.

"After interviewing business travelers, you might hear something such as, 'If I don't bring back some souvenirs for my son, I'm in real trouble.' What if a hotel could offer me some Chicago souvenirs, digitally?"

Combine that research with empathy and sprinkle in some digital solutions, and...

"One outcome might be a notification reminding the business traveler that if he or she is running out of time to acquire the souvenir," Griffith says.

While focus groups are important, Griffith says, it's important not to let them interfere with innovation.

"If Ford asked (a focus group) how to improve transportation, people would have said 'faster horses,'" Griffith says, adding that he's seen focus groups kill good ideas due to a lack of imaginations. Bottle Rocket doesn't throw hordes of people at projects either. Griffith says teams are small; each member brings a mix of skills to the task. Individuals are encouraged to show their work on whiteboards that cover the walls in Bottle Rocket's Addison office, inviting interactions from team members.

"Some people even keep their calendars on the whiteboards. It (the use of whiteboards) pulls people out of their shells, and they communicate more. When you see a developer walk up and say, 'How does that screen work?', the developer (who is passing by), might say 'Don't do it that way, do it this way,'" he said.

#### Visual training

Accenture's design and innovation consultancy – Fjord – acquired Austin-based Chaotic Moon in 2015 to help inject gamification and immersive experiences into client business models. Such acquisitions are allowing Fjord to harness the development skills of people including Josh Opel.

On a summer day, Extended Reality (XR) Specialist Opel demonstrated how the training works at Fjord's Historic Dallas West End office: Virtual Reality goggles give wearers a preview of what a renovated Subway would look like, prompting them to dress subs at the sandwich counter, scoring them for their speed and accuracy. The detail is remarkable, down to Subway's triangular, white slices of cheese, and the inclusion of a cash register to complete the transaction.

"It's a commitment to user-first perspective," says Paige Maguire, design director at Fjord. "The case studies that we do, in Accenture Interactive – they're very much committed to the new world of technology, from a human-centric approach."

Maguire says the digital training is affordable for store operators, allowing onsite training at practically all Subways. Fjord developers have built similar virtual reality software to simulate a nuclear power plant control panel and industrial motor assembly as well.

**Next generation workforce**Software developers at Richardson-

based RealPage focus on developing platforms that ease the work of managing rental real estate, whether it's commercial retail, residential. or mixed-use. In 2017, RealPage received a \$1.3 million boost from the State of Texas' Skills Development Fund. The grant helped hone the programming skills of about 700 RealPage employees, 200 of which were new hires. Instructors from Richland Community College (part of Dallas County Community College District) provided about 26,000 hours of customized training, half of which involved emerging information technology.

"At the end of the day, we have to move to new (programming) languages," RealPage CEO Steve Winn told an assembly last year. "Having the university system cooperate with business, in order to advance the educating, really makes a difference."

#### Data-driven experience

The Plano office of Walmart Technology opened early in 2018 with the intention of harnessing untold data troves to improve operating efficiencies among the world's largest retailer's thousands of stores. Plano office chief Carlos Riojas describes one application for computer vision technology: "Walmart has a lot of cameras in its stores," he says. "How do we utilize existing assets, with some of the newer technologies coming, to help the stores? We felt like one example would be using the existing asset on the produce aisle to identify when you know maybe fruit has fallen to proactively give alerts (to associates). And that's challenging, right?"

The "fallen fruit" example is a strong illustration of how data analytics can be used to improve the user experience from an employee perspective.

Riojas says it makes sense to open technology labs like his in the Dallas Region because it's close to the source of data. "You can be a startup that does artificial intelligence, but guess what, if you don't have data, you just have a bunch of cool people walking around. What they're trying to do is find big companies with big data."

#### Making travel easier

Roughly 60 designers spend their days and nights at Sabre finding ways to make life easier and more rewarding for their (mostly travel and hospitality oriented) clients, sanding the off rough edges of interfaces, and making sure platforms have a uniform feel for companies and innovating.

It takes people with specific skills to make that happen. Among them, Sabre user experience specialists help develop new platforms and think on ways to improve existing products. Design researchers ferret out troubles in software and speak with travel industry professionals to identify industry needs. Another team works to ensure Sabre designers are using the company's enterprise design language (called Spark) to develop platforms



that meet company standards and practices.

"Spark has its own library," says Bruce Nelson, vice president of design at Sabre's office in Southlake. "It has actual screen design files and code you can place into your apps."

Certain interactive platforms must comply to federal code.

"The DOT has stringent requirements for software," Nelson says. "This even goes with check-in kiosks at the airport," he says, adding that federal code requires check-in software that works with key commands, rather than a mouse.

### Improving interfaces, integrating AI into the client experience

Thomson Reuters is employing UX research and design thinking to reshape the way it does business around its customers. The company's UX and design practice is using extensive customer research to assist, toward that end, according to the firm. Thomson Reuters has extended those methods beyond product development, into digital marketing, emerging technology, and into improving internal processes that impact its customers indirectly.

Clients – who include tax professionals and lawyers across the world – are benefiting through improved customer experiences in various ways, including better online interfaces, and by leveraging



technologies such as artificial intelligence, machine learning, and decentralized ledger technology. All such projects start by including the firm's customers into the conversations and collaborating toward building solutions together.

#### **GROWING OPPORTUNITIES FOR ALL //**

The region's growing number of businesses has increased demand for professionals who work in various aspects of user experience. Combined with the growing need for UX experts at existing companies, many start-ups and newer businesses in that sector are swamped with work.

Roughly 80 percent of Dallas-based **Dialexa's** client base employ 1,000 or more people, says Doug Platts, vice president of marketing at Dialexa. A majority of Dialexa professionals are involved in some aspect of user experience, from user research to the final product.

"There are lot of great companies here that we can continue to grow with. Every company is a tech company, and we want to help them realize whatever opportunities that technology holds for them."

"The increasing presence of multi-national companies in Dallas has been a boon to business," says Jonathan Rosenberg, founding partner of **White Unicorn Agency**, a Dallas-based branding and design firm that employs 15 professionals in the Dallas Design District and whose clients include Michael Kors, Kimberly-Clark, and Hilton Canopy. "It means there's more work here."



Competition is heating up in the service economy, where the winners will be the companies who can beet anticipate sustained and an armide the best sustained. Compension is nearing up in the service economy, where the winners will be the companies who can best anticipate customer needs and can provide the best customer experience. Enter extended reality of companies and trainer of companies who can be according to the power of companies and trainer and trainer of companies which because the power of companies will be the companies who can be according to the companies of companies who can be according to the companies of companies who can be according to the companies of companies who can be according to the companies of companies who can be according to the companies of companies who can be according to the companies of companies who can be according to the companies of companies who can be according to the companies of companies who can be according to the companies of companies and the companies of companies and can be according to the companies of companies and can be according to the companies of companies and can be according to the companies of companies of companies and can be according to the companies of companies of companies and can be according to the companies of companies of companies and can be according to the companies of companies of companies and can be according to the companies of companies of companies and can be according to the companies of Dest anticipate customer needs and can provide the best customer experience. Enter extended reality — virtual and augmented realities — which harnesses the power of smartphones, computer vision, and troves of company data to bring display to days to days

**Scoring (augmented) Points with rans**Dallas-based 7-Eleven signed Dallas Cowboys starting OB Dak Prescott for its second character-based venture into Dallas-based 7-Eleven signed Dallas Cowboys starting OB Dak Prescott for its second character-based venture into Dallas-based 7-Eleven signed Dallas Cowboys starting OB Dak Prescott for its second character-based venture into Dallas-based 7-Eleven signed Dallas Cowboys starting OB Dak Prescott for its second character-based venture into Dallas-based 7-Eleven signed Dallas Cowboys starting OB Dak Prescott for its second character-based venture into Dallas Cowboys starting OB Dak Prescott for its second character-based venture into Dallas Cowboys starting OB Dak Prescott for its second character-based venture into Dallas Cowboys starting OB Dak Prescott for its second character-based venture into Dallas Cowboys starting OB Dak Prescott for its second character-based venture into Dallas Cowboys starting OB Dak Prescott for its second character-based venture into Dallas Cowboys starting OB Dak Prescott for its second character based venture into Dallas Cowboys starting OB Dak Prescott for its second character based venture into Dallas Cowboys starting OB Dak Prescott for its second character based venture into Dallas Cowboys starting OB Dak Prescott for its second character based venture into Dallas Cowboys starting OB Dak Prescott for its second character based venture into Dallas Cowboys starting OB Dak Prescott for its second character based venture into Dallas Cowboys starting OB Dak Prescott for its second character based venture into Dallas Cowboys starting OB Dak Prescott for its second character based venture into Dallas Cowboys starting OB Dak Prescott for its second character based venture into Dallas Cowboys starting OB Dak Prescott for its second character based venture into Dallas Cowboys starting OB Dak Prescott for its second character based venture into Dallas Cowboys starting OB Dak Prescott for its second character based venture into Dallas Cowboy Valuas-based /-Eleven signed valuas Cowboys starting UB vak Prescott for its second character-based venture into augmented reality marketing in its stores (the first campaign featured Deadpool). 7-Eleven stores become ballfields for augmented reality marketing in its stores (the first campaign featured Deadpool). They can interact with footballs scan promo codes augmented reality marketing in its stores (the first campaign featured Deadpool). augmented reality marketing in its stores (the first campaign featured Deadpool). /-Eleven stores Decome Dathleus (the formers who download the convenience retailer's mobile app: They can interact with footballs, scan promo codes found in stores and over take a colfe with Drossett

The Prescott AR campaign follows on the heels of a similar campaign that featured Marvel's wannabe Avenger, who interested with face by drawing on their faces with Character and who conved as target practice in balloon form. In The Prescott AK campaign rollows on the neets or a similar campaign that reatured marvets wannabe Averiger, with interacted with fans by drawing on their faces with Sharpies and who served as target practice in balloon form. In the prescott's case place are for solfier in various page. The AB various of Prescott also offers to suitagraph the photo. Interacted with tans by grawing on their faces with Sharples and who served as target practice in balloon form. In Sharples and the sharples are the the sharples encourages users to share the image on their social media accounts. (Continued on page 24).

## DESIGN WITH A BIG D

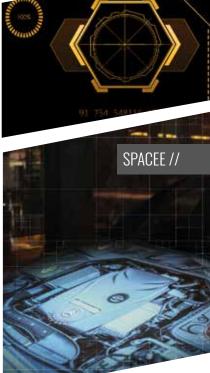




### DALLAS IMMERSIVE DESIGN AND DEVELOPMENT -AR/VR/MR **MEETUP**

Individuals interested in learning about virtual reality / augmented reality / mixed reality around innovative experiences come together to take a look at not just development but crafting experiences into these new technological mediums.

meetup.com/Dallas-Virtual-Reality/





During their voyage through augmented reality, 7-Eleven's customers are encouraged to rack up 7Rewards loyalty points by (among other things) visiting stores often and taking part in sweepstakes for exclusive fan experiences such as stadium tours. The campaign is part of the retailer's effort to make its stores football fan headquarters. The Deadpool campaign scored points with fanboys, fangirls, and even the media.

"The app isn't just good for a onenight stand of good clean AR fun; it changes every week. The next time you're on a late-night Trolli Sour Brite Tiny Hands candy run, pull up the app again — because you never know where Deadpool will literally pop up (in an AR kind of way)," writes Fast Company's Melissa Locker.

Participating markets for the new campaign include Dallas, Baltimore, Denver, Detroit, Washington, D.C., Buffalo, Chicago, Miami, New England, New York, Philadelphia, San Francisco, Seattle, and Tampa Bay. The AR includes a new "Quarterback training" game where you throw footballs through rings and earn 7Rewards points, plus a partnership with Reese's that can be unlocked in-store as well as summer-themed activities 7-Eleven launched a couple months ago.

#### Augmenting Reality, Human Touch

People don't need an app or a smartphone to immerse themselves in Spacee tech. That's because company founder Skip Howard wrote the code for the computer vision technology that allows individuals to interact with surfaces, which display information in response.

"You can pick up a real-world thing like a pair of shoes and can have interactions," says Marc Gilpin, who joined Spacee early on. Spacee uses high-quality Intel cameras that



#### CREATING A **NEW** REALITY

measure human interactions with objects; precision light projections – often, from lasers – transmit images back to the surfaces, in response. Those objects can range in size from relatively small to the side of a building.

Gilpin says he helped Howard brainstorm applications of the technology, and it wasn't long before the Spacee had a bite. "Ideas were flying," Gilpin says, adding that one of the ideas involved applying the tech to a stationary vehicle. "Skip called me a month later and said he sold the idea to Mercedes-Benz, and when can you join us?"

"How cool would be if you could touch the hood of your car and see the battery levels, oil levels, etcetera?" Gilpin asks. "It could be a sales tool at dealerships, where it's a user experience where people can walk up to it and tell the story that they want to hear."

The strength of the experience rests in the fact that users can

decide how long their interactions will last, he adds.

"A lot of people want to serve themselves and get the information they want. When they want to interact with people, they will ask for it," he says. "The trick from the beginning (in the history of sales) has been getting someone to hold something and to get an emotional attachment."

The trick from the beginning
(in the history of sales)
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to get an emotional
attachment.

- Marc Gilpin, Spacee

#### Immersive technology

The Dallas-based tech-centric creative agency 900lbs is perhaps best known for its effective use of virtual and augmented realities to help clients achieve their objectives. 900lbs works with PepsiCo, NCR, and NTT Data to build immersive experiences.

Given the task of showing how NTT Data's IT and data services work, 900lbs created two experiences. They built the Mosaic Wall, a nine-screen array that can be customized based on the individual who faces it. Motion sensors detect users, whose portraits transition as they move across the screens, which then reveal a large-scale, animated visual of the NTT Data logo. 900lbs, also collaborated with Cactex Media to create a room built of floor-to-ceiling screens that engage occupants with immersive images to help them understand the breadth of NTT Data's technology services and solutions.

900lbs develops interactive experiences from the ground up, working with clients to map out their objectives and stories, developing prototypes, and

determining what data should be incorporated into projects. By following specific processes and tried-and-true approaches, 900lbs designers get feedback earlier and are able adjust designs in a more free-flowing manner.

Founder and CEO Steve Deitz says, "Agility is crucial in this fast-paced business landscape and this puts pressure on how a team designs."

These processes also allow the client, who really is the most important designer in the equation, to be a larger part of the overall project production.

Diverse audiences and branding requirements have shaped 900lbs' capabilities, allowing developers to effectively deliver complex information through intuitive and brand-consistent visuals. Key elements include the use of smart composition, typographical layouts, color science and motion design, and carefully balancing creativity with user-centered functionality.

#### AT THE THEATER WITH CINEMARK

Cinemark has been busy changing the movie-going experience in a variety of ways.

The Plano-based motion-picture exhibitor is using its take on virtual reality – called hyper-reality – to place audiences into movies. Cinemark is unveiling the experience in September 2018, in partnership with The Void, which specializes in location-based experiences and ILMxLAB.



The premier showing of hyper-reality tech will be on display at a Plano Cinemark location for "Star Wars: Secrets of the Empire," where audiences (ages 10 and up, and taller than 4 feet) will sport VR goggles, disguise themselves as Stormtroopers, and carry blasters into the molten, mysterious planet of Mustafar.

ILMxLAB's mission is for people to "Step Inside Our Stories," ILMxLAB Executive Vicki Dobbs Beck states in media release. "With 'Star Wars: Secrets of the Empire', we sought to deliver a highly cinematic, interactive experience that places you and your friends at the center of an unfolding adventure on the mysterious planet Mustafar. We are excited for the opening of the Cinemark location in Plano... as this further expands the reach of our award-winning entertainment offering and will transport a new audience directly into the 'Star Wars' universe in a fully immersive, 4-D story."

Cinemark is also looking to improve the entire movie-going experience. CineMode, a component to Cinemark's mobile app, can be activated by any mobile app user to dim the screen and deactivate any alert noises or notifications that the user may receive during the movie. Activating Cine Mode ensures the best experience for the user and surrounding guests by eliminating the distraction of using a mobile device during a movie. Cinemark incentivizes this behavior with points for Cinemark's loyalty program and concession offers to drive future visits. Expect CineMode to evolve in the near future. Cinemark's loyalty team is constantly looking for ways to improve the customer journey, and CineMode is expected to play a major role. By incorporating gamification mechanics into CineMode, Cinemark expects to increase engagement outside of the theatre – a critical component to ensuring the long-term success of a loyalty program.

# A LOOK INTO THE FUTURE

Industry leaders say universities provide UX firepower

From developing autonomous trucks to incorporating science and the arts, universities in the Dallas Region are churning out U Experts

Companies, big and small, sing high praises of graduates with design-related degrees from Dallas area universities. Southern Methodist University, the University of Texas at Arlington, the University of Texas at Dallas, the University of North Texas, and other local schools work with leaders in the region's user experience community, helping fill job openings and honing curricula to better match industry demands.



#### UTD CREATIVITY //

The University of Texas at Dallas School of Arts, Technology, and Emerging Communication (ATEC) program emphasizes creative thinking and design complexly in curricula; experience design graduates apply theory to real-world scenarios in classrooms and in internships at area UX firms.

UTD programs focus on developing strong foundations in user interface design, sound design, video production, and digital fabrication—bringing digital creations into the physical world.

Students at UTD learn how to respond flexibly and imaginatively to the inevitable changes and disruptions of the market. They understand that people connect emotionally to objects and services around them, and seek to design rich and meaningful interactions.

ArtSciLab (within the School of Arts, Technology, and Emerging Communications) fuses science, technology, creativity, and the arts, to advance human understanding. The lab immerses students into the field of UX design and allows them to wade into solving real-world problems.

For example, one collaboration with ArtSciLab involves a multi-dimensional opera created to explain the basic principles of a new space-time physics concept.



#### UTA THEORY TO REALITY //

The University of Texas at Arlington focuses both on theoretical and practical work toward improving user experiences and bettering the ways in which people interact with computers.

UTA's Department of Computer Science and Engineering students are learning to build the next generation of computer interfaces. Studying problems in human-computer interactions (HCI), they are developing autonomous trucks, using gamification to help workers work more effectively and safely with robots in manufacturing facilities.

At the Heracleia Human
Centered Computing Lab
and the Motion Capture Lab,
students are encouraged to
build innovations with realworld applications developed
to help users with health care,
vocational safety, manufacturing,
training, rehabilitation, and
others. Students also have the
opportunity to interact with
local industries through the
iPerform industry-university
center.

UTA professors Hao Che and Hong Jiang developed a mathematical solution that could measurably improve computer user experiences, while balancing computing and network resource use. They have received a three-year, \$1 million National Science Foundation grant to build prototypes.



#### UNT DESIGN IN DENTON //

The University of North Texas focuses on empathy and industry, and user collaboration.

Students in UNT's communication design program are encouraged to take part in collaborative learning with recognized UX/UI companies to prepare them for the industry, upon graduation.

The program, located in UNT's College of Visual Arts and Design (CVAD), offers the state's only Master of Arts in design with a concentration in interaction design (MA in IxD), as well as a Bachelor of Fine Arts (BFA) degree in the disciplines of graphic design and UX design/human-centered design (HCD).

UNT focuses on the people who will use the devices, technologies, services, systems, processes, and protocols created. Students explore the process of design thinking, which includes an emphasis on empathy for users.

UNT's CVAD graduates more artists and designers than any other institution in Texas. The college will open a four-story, 133,000-square-foot addition and a renovation of its existing building in spring 2019 on its Denton campus. The MA in IxD is offered at UNT's new college in Frisco.



#### SMU AUGMENTED ED //

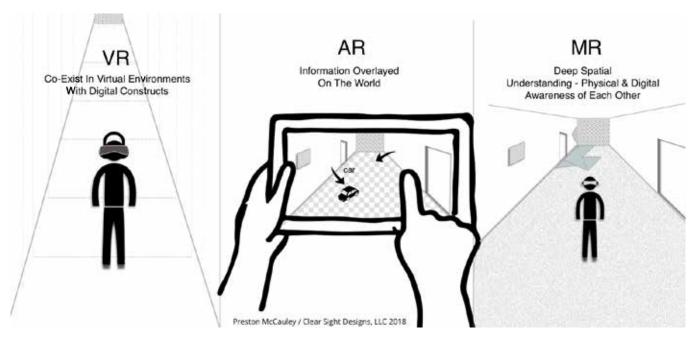
At Southern Methodist University, hands-on learning about design and UX focuses strongly on action and real-life application.

SMU's User Experience Design Certificate was developed with industry leaders and is rapidly changing as new courses and topics are added.

The program's core curriculum is amplified through the use of augmented reality, virtual reality, holograms, dashboard design, and branding on voice-enabled devices, and customer journey mapping.

SMU's Guildhall graduate video game education program was ranked No. 1 in the nation by the Princeton Review. This program was the first in the world to offer a master's degree in interactive technology and is the only program with specializations in all four cornerstones of game development: art, design, production, and programming. Guildhall has produced more than 650 alumni working at more than 250 studios.

A third arm of SMU design thinking and learning is the Master of Arts in design and innovation. Equipping students with the ability to solve complex issues through design thinking, courses tackle issues of social or public impact, among many others.



Preston McCauley, Principal AR / VR / UX / XR Design & Developmental Strategist at Clear Sight Designs and instructor with SMU's CAPE program, discusses the evolution of enhanced reality (ER) in the region and its UX talent pool. McCauley has been working to help UX professionals discover new ways to approach the craft.

#### Q: Where does our region fit, in terms of developing enhanced experiences?

**PM:** Dallas-Fort Worth is leading the way in bringing UX designers into the AR / VR evolution. I started teaching "UX Principles for AR / VR", the first elective designed to help students approach immersive experiences while giving them hands-on time with some of the most bleeding-edge technology, tools, and technology that many believe will shape our future.

#### Q: Explain the role exposure to enhanced reality plays in expanding its use.

**PM:** When students build their first VR experience, many have never picked up the technology. It's that moment when they begin to think of new possibilities and how to apply their UX talents in new ways. Through a series of thought-provoking activities, students learn how to think beyond the screen and envision a world surrounded by their creations.

Students first learn about understanding how to think about moments in relation to the user experience. Next, they are given a crash course on web technologies and new tools to help prototype these multi-dimensional experiences. Finally, each student will construct a personal VR experience that the entire class can step into and explore. By giving students a VR project, it provides for an intensive hands-on approach and teaches students how to think about abstract concepts, while keeping the design process heavily user-centric.

"It's not just about creating an experience for you; it's about understanding how to transport someone to the moment. In doing so, you help people perceive your design in new and exciting ways."

#### Q: Where does Dallas fit in, in terms of UX talent?

**PM:** Dallas has a robust blend of talent and skills. By providing ways for students to explore new possibilities, we can continue to teach and educate the community and create a new design-thinking generation ready to fuel startups and the corporate environment alike. User experience has been continuously growing over the years, and the industry is showing no signs of slowing.

# SOCIETAL URGENCY

UTD's Cassini Nazir on the First-Person Experience



It would make sense that the best education in userexperience would involve a first-person experience.

"Education has been forced to rethink itself with the emergence of massive online open courses (also referred to as MOOCS) to give the same kind of education as they would at Harvard," says Cassini Nazir, director of design and research for the ArtSciLab at the University of Texas at Dallas.

Nazir and former NASA astrophysicist Roger Malina oversee the ArtSciLab in the School of Arts, Technology and Emerging Communications at UT Dallas. Nazir's role as director of design and research at the lab is to solve problems through collaborations between artists, scientists, and designers.

For example, the lab collaborated with brain scientists to make data from functional magnetic resonance imaging (fMRI) more meaningful using sound. The approach, funded by the Defense Advanced Research Projects Agency (DARPA), allows data to be represented by sounds from which a trained listener might be able to discern patterns of brain connectivity not readily seen in available visualization strategies.

"Many students, when they come in, see how design can be fun. They're not doing math problems by and large," he says. "You're dealing with things that are tangible and visible. Students are attracted to making things look good. But we want them to make things behave well.

"That's where in-person education comes in," Nazir says. "Reflection is important for people who build things.

There's lots of assumptions we make when we build something because we put ourselves in that position. You're going to build your assumptions into it. You're designing for people who are unlike you."

It's where students learn – truly understand – the concept of "societal urgency:" finding needs and figuring out how to fill them.

"Some students found many seniors don't go to medical appointments because of logistics," Nazir says. "They started to look at a ride-sharing system to make it possible."

While the UTD students didn't develop a functional product in that case – their project went only as far as a prototype – they learned the practical process of design thinking.

"It's about an approach long term," says Nazir, a member of the Dallas Design Council, an organization formed by design leaders of Fortune 500 companies in the Dallas Region. The council's mission is to help meet the region's need for talented designers. "It's about helping people – that's not necessarily the mindset that they (students) come into it with."



## DFW IS A HOTBED OF HIGH-TECH ACTIVITY //

The user experience sector is exploding in the Dallas Region. That's the observation of University of North Texas' Michael Gibson, interaction design program professor at the University of North Texas. Gibson says he's seen an influx of workers with user-experience skills from highercost places such as Oregon, Austin, and San Francisco to the region.

"Dallas-Fort Worth is viewed as extremely liveable," he says. "The (work) market here is really robust. People love the idea of working in Austin (for example), but it's expensive and there's a jillion people trying to get the same job as you."

These professionals head to where there is work: The Dallas Region has added more than 800,000 jobs since 2010. Employers report widespread hiring of workers with user experience skills (which cover an

increasingly broad range, from design research to user-interface testing to graphic user interface (GUI) builder). Nearly 16,000 of these workers claim UX skills, according to the EMSI labor market analytics firm.

It might be a surprise to some to learn that the Dallas Region employs more workers with those skills than Silicon Valley, Austin, and metro Denver. This is no surprise to the likes of Michael Courtney, a futurist and market researcher who was

# BY THE NUMBERS

DALLAS-FORT WORTH'S ROOTS IN TECHNOLOGY PAIR WELL WITH THE BOOMING UX/UI ECONOMY

The Dallas Region employs large numbers of tech workers at varying occupational scales, including being home to the seventh biggest high-tech workforce in the U.S. For the decreasingly smaller subsets of computer occupations and software developers and programmers, Dallas ranks sixth and eighth, respectively.

#### HIGH-TECH WORKERS BY METROPOLITAN REGION //

REGION	ALL HIGH-TECH OCCUPATIOINS	ALL COMPUTER OCCUPATIONS	SOFTWARE DEVELOPERS
New York-Newark-Jersey City, NY-NJ-PA	488,987	298,449	128,892
Washington-Arlington-Alexandria, DC-VA-MD-WV	353,743	216,300	72,067
Los Angeles-Long Beach-Anaheim, CA	337,117	169,950	72,120
San Francisco-Oakland-Hayward, CA	255,488	145,338	76,171
Chicago-Naperville-Elgin, IL-IN-WI	252,910	139,587	52,451
Boston-Cambridge-Newton, MA-NH	252,112	126,281	61,395
Dallas-Fort Worth-Arlington, TX	232,889	141,087	53,343
Seattle-Tacoma-Bellevue, WA	222,336	137,836	80,702
San Jose-Sunnyvale-Santa Clara, CA	219,880	135,608	83,188
Houston-The Woodlands-Sugar Land, TX	200,657	79,730	27,324
Atlanta-Sandy Springs-Roswell, GA	182,594	114,692	43,323
Phoenix-Mesa-Scottsdale, AZ	136,152	76,856	29,234
San Diego-Carlsbad, CA	129,086	54,624	26,158
Austin-Round Rock, TX	97,290	60,749	26,891
	Source: EMSI Q3 2018 QCEW		

involved in incorporating the first camera into a cell phone when he was working at Nokia.

"In general, Texas has been a good market for (job) growth," says Courtney, founder of Aperio Insights. "There are lots of tech savvy people, and they stayed here, even after the telecom (bubble bust). We have a large population of people who are good at dealing with things that are complex."

The Dallas Region's strong tech pedigree remains. In fact, nearly four out of 10 workers in Texas with user-experience-related skills live in the Dallas Region, according to EMSI.

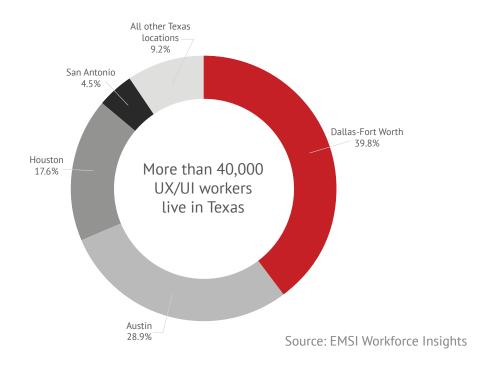
Dallas-Fort Worth is among the top 10 metro areas, in the number of high-tech jobs, computer occupations, and software developer and computer programming jobs, according to an analysis of federal jobs data.

#### SAMPLE OF MAJOR COMPANIES WITH SIGNIFICANT UX/UI TEAMS IN THE DALLAS REGION //



Among online worker profiles, professionals who self-identify as possessing UX/UI skills are heavily concentrated in a few major metropolitan areas. Among Texas-based UX/UI workers, nearly 4-in-10 call the Dallas Region home.

#### WHERE UX/UI WORKERS LIVE IN TEXAS //



# **ERESOURCES**

#### UXPA GROUP //

The Dallas User Experience **Group** is the local chapter of UXPA International with more than 2,800 members in the Dallas Region. In this group, designers can: network with other designers to exchange ideas; listen to speakers at monthly meetings; look for their next opportunities with managers and recruiters; learn best practices at a workshop; attend the Big Design Conference to learn from industry experts; and see local talent showcased to spotlight the best of Dallas UX.

meetup.com/
Dallas-User-Experience-Group/

#### LADIES THAT UX GROUP //

Ladies that UX Dallas Chapter is a monthly meet-up that creates a welcoming, transparent community of women that work in UX, who positively promote and teach each other.

ladiesthatux.com/dallas/

## PRODUCT TANKDFW MFFTUP //

ProductTank provides an opportunity for product managers in the Dallas-Fort Worth area to exchange ideas and experiences about product design, development and management, business modelling, metrics, user experience, and more.

meetup.com/ProductTank-DFW/



#### XD ALLIANCE GROUP //

Experience-Driven Dallas is part of the XD Leadership Alliance (experiencedriven.com). Board leadership includes corporations that have a strong presence in the Dallas Region. XD's mission is to encourage company leaders to incorporate experience into all aspects of company operations. This includes creating strategies based on deep customer insights, making all interactions with customers matter, and experimenting often.

experiencedriven.com







THE DIGITAL MEDIA
PLATFORM COVERING
DALLAS-FORT WORTH AS A
HUB FOR INNOVATION

A COLLABORATION OF THE DALLAS REGIONAL CHAMBER AND D MAGAZINE PARTNERS

#### DALLAS INNOVATES MEDIA //

The Dallas Regional Chamber works with media partners to tell the stories behind breakthroughs and innovations occurring in Dallas-Fort Worth.

The DRC and D Magazine Partners have joined forces to produce the Dallas Innovates website and the Dallas Innovates magazine, which profiles the game-changers, disruptors, and other forces at work in the region's economy. The online publication, which launched in 2015, employs the expertise of journalists and industry contributors with decades of experience to break news about the latest and most creative ventures shaping the Dallas Region's business environment.

dallasinnovates.com

Perhaps the strongest testament to the Dallas Region's UX/UI community is the proliferation of creative groups and institutions that include user experience and user interface designers. Area associations, events, organizations, and educational institutions help designers brainstorm, commiserate, learn, and hone their skills.

## DFW FRONT-END DEVELOPMENT MEETUP //

Group of more than 1,400 developers and designers gathers to share their knowledge, to discuss frameworks, such as AngularJS, and front-end ecosystems toolsets including Bower, npm, gulp, and others.

meetup.com/
DFW-Front-end-development/

#### CREATIVEMORNINGS FVFNT //

**CreativeMornings** is a free monthly breakfast lecture series designed for creative communities.

creativemornings.com/cities/da



### BIG DESIGN CONFERENCE EVENT //

Originally conceived in 2008, the **Big Design Conference** has become a must-attend event for user experience and usability professionals, digital marketers, designers, content strategists, and developers in the Dallas Region. Its goal is to provide a low-cost, high-value conference experience. Big Design speakers are a mix of industry leaders, well-known authors, web influencers, application developers, and more. The conference draws more than 1.000 attendees.

#### CXPA GROUP //

**Customer Experience** 

Professionals Association
(CXPA) is a global nonprofit dedicated to the advancement and cultivation of the customer experience profession. The CXPA supports the professional development of its members and advances the field by providing shared best practices and education, developing standards, offering networking opportunities, promoting the industry, and creating a better understanding of the discipline

of customer experience. The

Dallas Local Network (founded in

2011) represents more than 200

cxpa.org

companies.

### PROJECTUX MEDIA //

ProjectUX is a web-based show based in Dallas, in which user experience experts - "UXperts" - help startups improve their products. These experts send startups through an objective, authoritative review and a round of usability testing as they learn how to improve their user experience. The show has roughly 1,600 subscribers and more than 58,000 views. Startups and UXperts have been filmed on location in Austin, Phoenix, L.A., and Atlanta.



#### Dallas Immersive Design and Development -AR/VR/MR MEETUP //

Individuals interested in learning about virtual reality / augmented reality / mixed reality around innovative experiences come together to take a look at not just development but crafting experiences into these new technological mediums.

meetup.com/Dallas-Virtual-Reality/

projectux.tv

#### AIGA GROUP //

American Institute of Graphic Arts, The Professional Association for Design

(AIGA) advances design as a professional craft, strategic advantage, and vital cultural force. As the largest community of design advocates, AIGA brings together practitioners, enthusiasts, and patrons to amplify the voice of design and create the vision for a collective future. The institute defines standards and ethical practices, guides design education, enhances professional development, and makes tools and resources accessible to all.

dallasftworth.aiga.org

#### REFRESH DALLAS MEETUP //

**Refresh** is a community of designers and developers working to refresh the creative, technical, and professional aspects of new media endeavors in the Dallas Region.

meetup.com/Refresh-Dallas/

# DALLAS SOCIETY OF VISUAL COMMUNICATION (DSVC) GROUP //

The DSVC consists of designers, writers, photographers, illustrators, broadcast producers, and the many vendors and suppliers who support them. DSVC seeks to elevate the standards of the industry and promote the value that creative professionals add to commerce and the community at-large.

dsvc.org

## THE INTERACTIVE DESIGN FOUNDATION GROUP //

The Interaction Design
Foundation is a 10-year-old
nonprofit community focused
on educating, informing
and stimulating design
professionals and students, as
well as providing curriculum
and training materials for
universities and professional
corporations around the globe.

interaction-design.org/localgroup/north-america/unitedstates/dallas



### A BUNCH OF SHORT GUYS GROUP //

A Dallas-based nonprofit animation guild established to foster a community of world-class artists and storytellers. The group – which includes user experience and mobile development experts – provides a resource for the community of entertainment professionals, educators, and students helping visual creators pursue career development.

abunchofshortguys.org

## FREELANCERS UNION SPARK GROUP //

The local hub for freelancers to connect with one another. Monthly meetings discuss such topics as starting a freelance business, growing a current freelance business, pricing, taxes, legal considerations, and more.

dallasfreelancersunionspark.com



#### DFW REGIONAL INNOVATION GUIDE WEBSITE //

The Dallas Regional Chamber maintains an exhaustive, interactive directory for entrepreneurial work across North Texas. The guide, published through Dallas Innovates, connects innovators and entrepreneurs with the information they need to succeed. The guide links visitors to more than 50 startup funding sources; more than 190 creative hubs, coworking spaces, and innovation labs; and more than 100 sources of information, pitch events, and professional development groups.

guide.dallasinnovates.com



The South Side Quarter Development thanks Big Design and Industry Giants leaders, guests and sponsors for bringing your brilliance, business and creativity to the South Side Cedars neighborhood.

Thanks also goes to the associations and venues who helped make it happen.

We all hope you come back again and again.























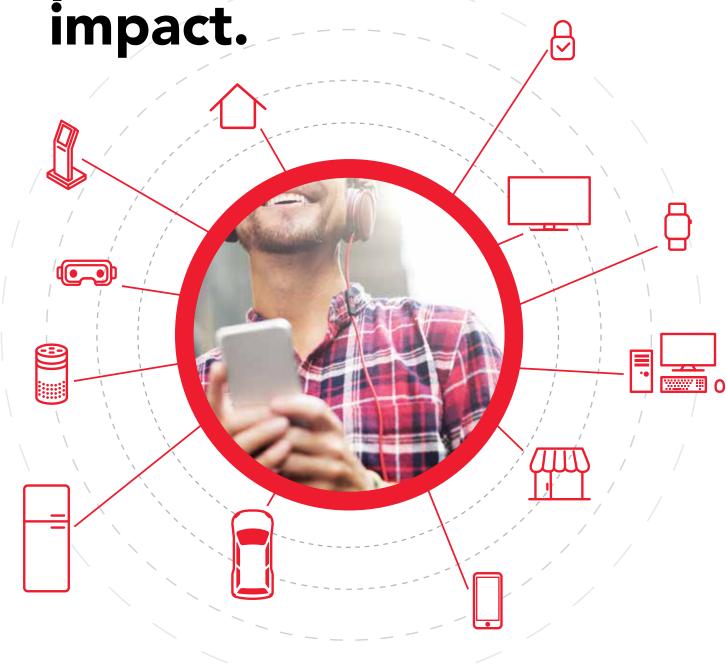






# powerful connected experiences.

powerful business



At Bottle Rocket, we connect brands to their most valued customers. By building premiere experiences for the connected lifestyle, we make your brand the one people choose. Our commitment to applied innovation drives outstanding performance and real brand loyalty.

And we do all this from right here in Dallas.

