

Adapting Interaction Design Towards a Multimodal Future

by Rachel Poonsiriwong



Cheryl Platz: Capturing Customer Context for an Upside-Down World

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Multimodal design expert Cheryl Platz shares a framework for exploring deeper human context inspired by her time in improvisational theater, and walks you through how these dimensions and insights will unlock greater success for your complex products and experiences. Inspired by Chapters 2 and 7 of Cheryl's new book from Rosenfeld Media, [*Design Beyond Devices: Creating Multimodal, Cross-Device Experiences*](#).

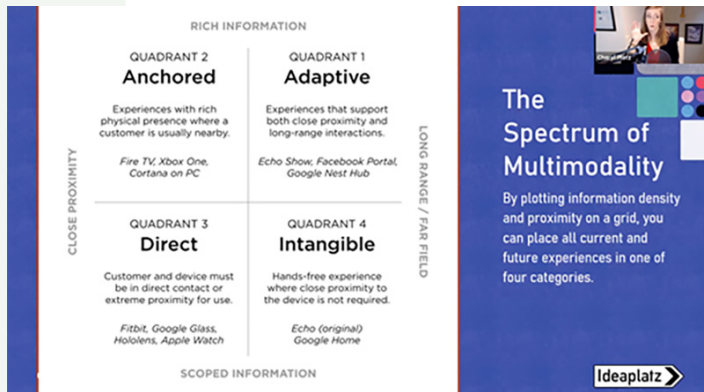
As humans, we interact with the world around us by embracing different natural modes of communication to engage all five senses. However, ubiquitous technological devices like laptops and mobile phones seem to position themselves as “one-stop shops” instead of fostering possibilities for multi-modal interaction models. This is especially true in the context of certain customer experiences like online shopping, where the visual component of human experience is singularly engaged over the other senses like touch, taste, sound, and smell. However, as designer and design educator Cheryl Platz put it, “there is no one true interface.” An advocate for multimodal interaction models, Platz explained that human-centered design should take into account the customer’s objectives and technological constraints to decide “what kind of interaction model makes sense in the moment,” beyond the digital screen.

I was particularly excited to attend this talk by Platz, titled “Capturing Customer Context for an Upside-Down world.” As I had attended Rosenfeld Media’s Advancing Research 2020 conference and saw Platz moderate several discussions, I was interested to learn more about their new book titled *Design Beyond Devices*. Over the course of this informative lecture, Platz introduced to us the “Spectrum of Multimodality” that gives a high-level overview of different types of human-computer interaction, as well as the customer context research framework they call “C.R.O.W.” Inspired by Platz’s career as an improv performer and teacher, the “C.R.O.W.” framework is rooted in storytelling, which is an important component of human-computer interaction.

Platz began by explaining different frameworks of communicating information such as “Visual,” “Auditory,” “Haptic,” “Kinetic,” and “Ambient.” Each of these modalities engaged different senses, such as how “Haptic” provided live feedback to human interaction in the form of taps and clicks. Out of these different modality types, I found myself most intrigued by “Ambient” because of how broadly it was defined as “inferred meaning driven by environmental or biometric conditions: temperature, heart rate, lighting, etc.” As if having read my mind, Platz gave an example of a grocery store door that opens upon sensing a visitor’s presence. I started thinking about how we could leverage designing for an “Ambient” modality to reduce the need for touch in everyday interactions like swiping a credit card or pushing elevator buttons.

How can we then decide what types of modalities to engage when designing for a certain group of customers? Following the introduction of these different modalities, Platz distilled that decision into two dimensions--information density and device proximity. The question “How rich is your information?” about

how much information is conveyed at once, can be answered both ways, “high” or “low.” Low information density interfaces include small screens like the smart watch or wearables, while high information density interfaces include a book or a computer screen. Platz also mentioned that it was important to consider how near a device would be to the customer, so we as designers would understand what interactions could take place between the customer and device. A device that would be considered “close” to the customer is their smartphone, which is assumed to be at arm’s-reach from them. On the other hand, a device like the television would be considered “far,” given that there is always a distance of three to ten feet between it and the person watching it.



Slide from Platz’s lecture showing a matrix diagram of the Spectrum of Multimodality.

To help us understand the types of interaction models in relation to information density and device proximity, Platz introduced the “Spectrum of Multimodality” which featured four quadrants of interaction models against these two axes. This 2x2 matrix diagram was intended to help bring clarity around what interaction model would best suit the customer’s objectives and identity in the moment.

For example, Quadrant 4 represents the “Intangible” interaction model, which we can think of as our relationship to Internet of Things (IoT) devices like the Amazon Echo and Google Home. From a long distance, Google Home can provide scoped bits of information to the person asking it a question, such

as the weather forecast. On the contrary, Quadrant 2 represents the “Anchored” interaction model where a lot of information is shared with the customer at close proximity, such as a laptop screen. This matrix diagram helped me learn how to decide on which interaction model to design for a customer, but I was still unsure of how to investigate the questions of proximity and information density. As designers, how might we understand customers’ needs and preferences, so that we can best identify the right amounts of information they require, and how close they are to the devices they use most?

To help frame the customer research process, Platz introduced the C.R.O.W. storytelling framework, which is an abbreviation of “Character,” “Relationships,” “Objectives,” and “Where.” Influenced by Platz’s stage background, C.R.O.W. is intended to touch on different aspects of customer behavior and identity, creating a holistic profile of their needs and objectives. The “Character” part of C.R.O.W. refers to what defines the customer, such as attitudes, attributes, or choices that are inherent to their self-identity. It is also during this important stage that customers’ disabilities are disclosed so that designers would understand how to craft interactions in an inclusive manner. In my personal experience, I had to work closely with people with disabilities on a mobility app, and crafted the user experience of this app based on the unique movement needs of cerebral palsy patients. While I do not believe that a differently-abled person should be defined by their disability, I agree that understanding a customer’s comfort level and existing constraints would help build a more inclusive future for interaction design.

Following “Character,” “Relationships” seeks to uncover the ways in which a customer would like to interact between themselves and another person, as well as between themselves and the device or business. Additionally, Platz encouraged us to accurately identify the core goals, or “Objectives,” of our customer group, going beyond the screen to define a device-agnostic human objective that characterizes the customers’ desires and wants. Last but not least, Platz wrapped up the context-setting by understanding what surrounds the customer, the “Where”

in C.R.O.W, which could include the existing network of technological devices around them or their living situation. To help synthesize the customer research and identify the best interaction models for them, Platz mentioned that considering a “proactivity strategy” would help customers learn more about a multimodal experience that they are about to experience in a less obtrusive way.

Overall, Platz’s talk was incredibly eye-opening for me, because I had the opportunity to learn more about designing for multimodal interactions. I also found it surprising that Platz’s theatre background led them to implement this C.R.O.W. framework in customer research, which reminded me of how different fields influence interaction design. With the knowledge of different interaction models, and how to conduct customer research in a holistic manner, I hope to create innovative experiences that truly adapt to the natural ways that my customers experience the world.

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