Hoal about the interface

Six ways generative AI will change how users interact with your products



At noon on April 22, 1889, pistols, trumpets, and cannons signaled the start of the Oklahoma land rush, prompting an estimated 50,000 humans from around the U.S. to surge forward in one instant.

Eager to claim their allotted 160 acres, settlers planted their stakes and then rushed to the land office to register claims. It must have been quite the sight, such a mass of humanity ringing a vast empty space.

If we could give shape and physical form to the industry that powers our digital lives, it would look strikingly similar—a wide-open plain dotted with new entrants, frantically working to claim a swath of space as thousands of people watch and plot their own next moves. We've been here before, when the iPhone ushered in the age of apps. The advancement of AI in recent years has been shockingly rapid, and looks likely to lead us out of the app era and into something new; an evolution that will pull technology out of our phones and into the air around us.

As computers increasingly understand human language, a new level of comprehension will emerge, with friction removed in new ways and interaction metaphors reshaped. It will create a new computing metaphor that could break the Apple tax. It will spark another digital land rush, much like what occurred with the app economy.

This is more than just language. It is better object identification and the ability to understand context and build a continuous data story about an individual.

The impacts of this are so wide-reaching that it can be hard to imagine them — and therefore plan and prepare for them. But there's a lot we can infer about this new age from what's appearing on the landscape, and what we've seen over 10 years of designing at the edge of computing. Let's dive in.



Heads-up computing replaces the home screen

We will soon stop thinking of AI as a specific destination. It will instead become a wrapper that always surrounds us, to be accessed in the most contextually convenient ways. Persistent, omni-channel, omnipresent interactions will span all our digital experiences. A camera and mic will become your new starting point; one in which you look at the real word and ask about anything. A fragment of a spoken sentence and a quick hand gesture bridges our requests and the AI responds in a modality that is tuned to the environment.

This new interaction model will be built up in four layers: look and ask, threaded reply, action, and then transaction. Imagine looking at a concert poster through your smart glasses and saying, *"Hey Siri, get me aisle seats to this concert for less than \$80."* This new pattern will usher in a profundity of devices rather than a profundity of apps. It's why we're seeing an explosion in new peripheral devices worn around the neck or as pins. Ultimately, these will likely consolidate into a pair of glasses with a camera, mic, and speakers.

These ephemeral applications, as we call them, will be there when you need them and gone when you don't. They'll be generated on the fly, and only exist for as long as you have a need for them. *"Hey Siri, can you give me a booking screen with an overview of all ski schools in the Taos area that have availability today, and filter out any results that have unfavorable weather conditions?"*

Traditional application development is already becoming increasingly unnecessary, and this will only accelerate with Al's sophistication. Which brings us to...



The economy shifts away from apps

As the point of transaction shifts from the app store to the web, much will need to be rethought. If even 30% of what we currently do on apps migrates to this new interaction, it will turn mobile phones into a commodity infrastructure item. Features will need to be rethought on a per-user/per-task basis. Instead of paying for applications or subscriptions, users will pay for access to data through various APIs. Whoever masters the nuances of the new interaction metaphor likely opens up an Apple-sized market. Economic power will shift when AI becomes the new home screen.

In this new future, products and services will need to be represented as data fed into large AI models. After decades of user sacrifice, the shoe will go on the other foot. As companies need to place their data into large models in order to compete and be considered a viable player in their industry, there will be a change in business attitudes and policies around IP. Companies will be willing to give up privacy for features.

We'll begin a new era in data privacy, in which users control their data, holding it in a data marketplace.



The definition of a brand changes

When transactions are happening outside of a company's walled gardens, businesses will need to prioritize metrics like attention and service value. This inverts the competitive edge of holding and controlling user attention to a new landscape that rewards collaboration and sharing attention.

Companies that give up trying to be a distinct brand with a fully controlled user experience will thrive, offering capabilities that can be remixed into larger and more sophisticated user experiences choreographed by the Al interface.

Brands will need to redesign entry points to be read by computers instead of people.

Websites (and their enabling APIs) will be reformulated not just for SEO, but to be understood robustly by AI. Companies will focus more on ensuring their data is clean, structured, and usable by LLMs and other AI utility providers.



Smart dumb things

The spaces we inhabit and the devices and appliances populating those spaces will all be aware of the same set of conversations. LLMs will have more innate context memory, enabling general, ongoing conversations like, "What was that movie I was asking about last week? Remind me to watch that next weekend." Rather than starting a new thread that needs to gain context over time, the human/AI interface can feel more like a relationship.

The ability for intelligence to move from cloud to device will also allow us to reimagine how our machines work. Smart washing machines will become intelligent, determining cycle settings by the instructions you give them—simply tell it that you spilled queso on your jeans and the machine does the rest. A new kind of Ring Camera will identify the vehicle that pulls up to your house, and text to let you know that Amazon has arrived. A leak detector on your toilet utilizes extreme low-power analog computing to run a machine learning model that identifies a leaking flapper, texting you to say "your guest bath toilet is leaking; you should replace the flapper." The use cases are endless.



Menus yield to co-pilots

Over time, the underlying traditional GUI (graphical user interface) layouts will diminish in favor of an AI conversational flow that lays over the product itself. Imagine the toolbars in Microsoft Office no longer defaulting to visible; instead, buttons and parameters in the ribbon will be invoked in context of use. New users will arrive into software applications as a response to a prompt. For each user, the AI will prepare the scene in the software so it's ready to fulfill the request. A question like, "How do I perform double-entry ledger accounting in Excel using this table in Salesforce and this table in SAP?" will shift from producing a tutorial to directly solving the request alongside the user.

This style of GUI will force designers to begin thinking in flows and systems rather than concrete, visible menus. The ability to create that flexible, modular system will be more important than the pixel-size or orientation of specific buttons. Designers will create the spaces needed to house UI that the AI generates and fills based on the context and need of the user.



Systems integration becomes unnecessary

Al becomes capable of using any piece of software on behalf of the user without intervention. The user may not see the underlying software capabilities being invoked by the Al to respond to a request. Instead, we'll see a report downloadable from the chat flow with an executive summary explaining what to expect. Al playing a human user proxy role and having access to the underlying model and controller functions within the software leads to users no longer caring about views at all.

Al will provide the ability to represent entire pieces of software inside other pieces of software.

For example, a slide in Powerpoint may refer to an SAP process output. During the creation phase, a miniature version of SAP can be rendered within Powerpoint that produces a particular result that is being presented. At presentation time, the AI can invoke and update the process in SAP as needed. These capabilities fuel AI's ability to be reliable while spanning between software with ever-waning human intervention. Systems integration budgets plummet. Complex systems integrations can be evoked on demand by need. Software will need to be designed with AI as the "user" in mind. Usability shifts from human limitations to machine limitations.

Software runs the world.

There have been a handful of innovations over the last 30 years that created huge leaps in how the world used technology—the move from DOS to Windows, from Windows to the web, from web to mobile, client-server to the cloud, and now the advent of AI.

These tectonic shifts all share a common factor—the interface changed. People were better able to harness the promise of computing, able to do more than before, able to do those things more creatively, efficiently, smarter, and in the context of their lives in offices, at home, and on factory floors.

As we stand on the precipice of another massive change, it's an ideal time to consider how your business is going to adapt, from how you manage your applications and customer data to your internal processes to the very ways you deliver products and services.

You're going to need entirely new approaches to designing effective, usable, intuitive interfaces. It's a big transition, and the first mover advantage is on the table now. Don't let your competitors get there first.

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Our very first client was an Al company, and we're excited to help make this a better future for all of us. It's a big transition. We can help.

Send us a message-we'd love to hear from you.

