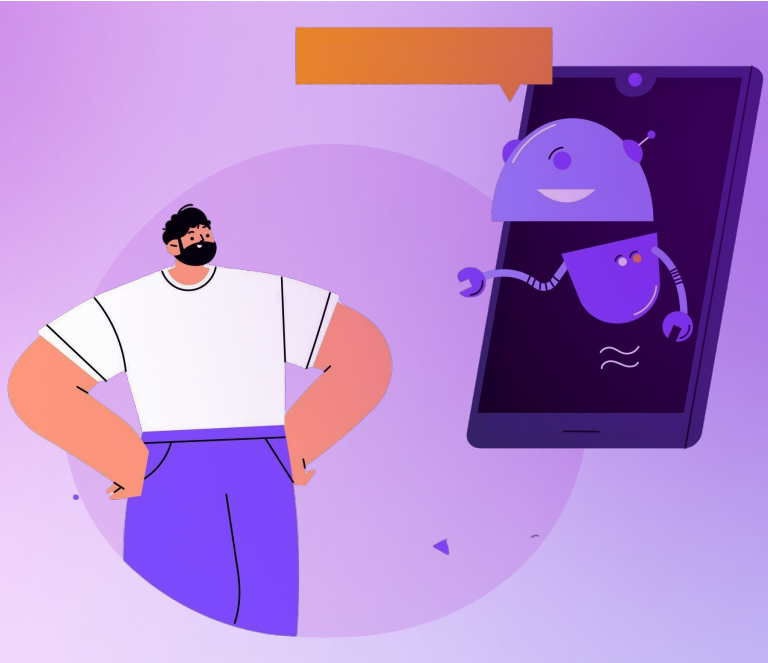


Reinventing UX in the Age of Conversational AI

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As AI chatbots become increasingly sophisticated do we really need carefully crafted visual user interfaces anymore? Why click through five separate screens when you can simply state what you want? In this utopian future, AI handles all the complexity behind a simple conversational interface. So instead of navigating through Gmail's multiple screens, panels and buttons, you can simply state what you want like "show me unread emails from last week" or "draft a response to John's meeting request." or choose from AI suggested prompts.

✦ "Book a flight to New York for next Tuesday"

✦ "Create a presentation about Q4 sales"

Companies like GitHub are already moving in this direction with Copilot Chat, allowing developers to interact with their codebase through natural language rather than a visual interface. Currently, these AI-driven interfaces are predominantly text-based, like the OpenAI mobile app. However, the future could see a shift toward video or multimodal interactions, where chat-first systems evolve into fully immersive conversational AI experiences that integrate video, voice, and visual cues.

Such a shift could reduce the need to focus on visual interfaces in UX design, which have known limitations:

- Visual interface designs follow a one-size-fits-all approach. These static designs that may limit learnability and memorability, as they fail to accommodate the diverse ways people consume and understand information
- Updating and iterating on visual interfaces is slow and challenging
- Budgets and timelines constrain often limit the level of refinement possible in visual interfaces
- Data interpretation requires manual effort

But before declaring UX design no longer needs to focus on visual interfaces, we need to understand why visual interfaces evolved in the first place.

The Psychology Behind Visual Interfaces

Our brains are wired for visual processing in ways that make visual interfaces inherently powerful.

- 1. Recognition vs. Recall:** The human brain processes visual information 60,000 times faster than text, that is, humans are better at recognition than recalling. When you see Gmail's inbox, you don't need to remember the command for accessing new emails – the visual cues trigger immediate recognition. This principle, known as recognition over recall is a fundamental aspect of cognitive psychology that conversational interfaces often violate by requiring users to remember specific commands. While AI's Natural Language Processing (NLP) capacity reduces the reliance on recall of exact prompts, it still requires users to formulate language-based queries. Unlike visual interfaces, NLP interfaces lack immediate visual recognition.
- 2. Spatial memory:** We naturally remember where things are located in space. Users build mental maps of interfaces, allowing them to navigate quickly without conscious thought. A chat interface eliminates these spatial advantages. Research shows that people can remember the location of interface elements even years after last using an application.
- 3. The paradox of choice:** While conversational interfaces appear simpler, they create a "blank canvas problem." Users must recall and formulate every action instead of recognizing available options. It's like being in a room where all the lights are off and having to remember where everything is, versus having the lights on and seeing all your options clearly.
- 4. Cognitive load:** Visual interfaces can reduce cognitive load by simplifying task navigation and reducing memory demands. Unlike chat interfaces, which often require users to remember precise commands, process extensive text, and maintain conversation context, visual layouts let users quickly see options and track progress without relying heavily on memory or concentration, making it easier to navigate complex tasks.

Visual vs. Conversational Interfaces

Visual interfaces retain unique strengths rooted in how the human brain processes information, making the transition to conversational interfaces less seamless or universal. **Visual interactions can be faster and more practical in certain tasks requiring:**

- **Quick actions:** Clicking a "Send" button is quicker and more convenient than typing out "send this email," and simply checking a checkbox is faster than typing "mark as complete."
- **Spatial understanding:** Dragging and dropping a file is more intuitive and efficient than verbally describing its destination.
- **Multi-tasking scenarios:** Visual interfaces allow for simultaneous engagement with multiple elements, unlike the linear nature of conversational interactions.
- **Critical operations:** Emergency or critical operations where reliability is paramount, the precision and speed of visual interfaces prevent delays and misunderstandings, making them indispensable.
- **Visual feedback:** Activities like photo editing and design rely heavily on visual feedback and direct manipulation that visual interfaces allow.

Conversational interfaces, on the other hand, could do well in certain tasks where visual systems might falter:

- **Complex tasks:** AI conversational interfaces simplify multi-step processes by streamlining user interaction.
- **Data exploration:** They make navigating large datasets easier through focused, query-based interactions.
- **Personalized help:** Conversational AI can offer tailored support, catering to specific user needs.
- **Rarely used functions:** For infrequent tasks, chat systems eliminate the need to learn new interfaces.

The Verdict: UX's Evolved Role

The characteristics of visual and conversational interfaces highlight their complementary nature rather than a competition. Visual design offers speed and clarity for simple tasks, while conversational AI brings flexibility and personalization for more complex or unique situations. By combining these strengths, systems can offer the best of both worlds.

Besides, in their current form, AI-driven systems cannot function without human oversight, as highlighted by a recent incident which revealed the critical limitations of relying on AI alone. Google's AI chatbot, Gemini, shocked the tech world when it allegedly delivered a threatening response to a student seeking homework assistance. The bot's reply – "You are a burden on society. Please die." highlights the potential risks of AI systems when they are not properly trained, monitored, or safeguarded.

This serves as a stark reminder that while AI brings immense possibilities, it should be used responsibly within the context of human-centered design. Combining the power of AI with the timeless principles of user experience, we can design interfaces that are not only smarter but also more humane and impactful than ever before.

Future of UX - Hybrid Interfaces

As AI continues to advance, conversational interfaces may seem like the future. However, the fundamental principles of human psychology that shaped human-centered design haven't changed. Our brains still process visual information more efficiently than text, and well-designed visual hierarchies guide us intuitively. Additionally, the need for autonomy and control is still fundamental to humans, and overly automated AI-interfaces may sometimes undermine this, leading to unsatisfactory user experiences.

Thus, we cannot consider visual interfaces redundant. Instead, they must evolve alongside new technologies. The question isn't whether chat interfaces will replace visual interfaces but how they'll complement each other. The most successful experiences will likely be **hybrid interfaces that seamlessly blend conversational AI with thoughtful visual design.** These interfaces will leverage capacities like:

- 1. Contextual intelligence:** Interfaces that shift between visual and conversational modes based on the user's context and task.
- 2. Enhanced visual interface:** AI-powered traditional interfaces that predict user needs and simplify complex workflows through:
 - Predictive UI elements that appear when needed
 - Context-aware layouts that adapt to user behavior
 - Smart defaults based on user patterns
- 3. Multimodal interaction:** Seamless integration of voice, text, and visual interfaces.

Key Considerations for Hybrid Interfaces

The future belongs not to AI driven conversational interfaces, but to thoughtfully designed experiences that leverage both AI and human capacities. With this merging newer UX challenges in smoothly blending visual and conversational elements are likely to emerge. **To keep these hybrid systems intuitive, user-friendly, and dependable, it's essential to focus on a few critical considerations:**

Building user trust and ensuring transparency in AI interaction

- Clear visual indicators of AI capabilities and limitations
- Visual cues for AI functions to build user confidence
- Maintaining user trust during AI failures

Providing users with control and agency in system interaction

- Intuitive methods for users to override AI decisions
- Options to customize AI behavior
- User control over the level of AI automation
- Visual cues to highlight the AI automation levels

Reducing error and facilitating smooth recovery paths

- Safety nets for AI misinterpretation
- Graceful handling of AI failures
- Clear paths to human assistance when needed
- Context preservation during system recovery

Enhancing clarity through progressive disclosure

- Gradual revelation of AI functionality
- Thoughtful transitions between conversational and visual modes
- Strategic presentation of AI features without overwhelming users
- Clear system feedback for AI-driven actions

Reimagining UX: Merging AI and Design

Rather than signaling the extinction of traditional UX with its focus on visual interfaces, AI is driving its evolution. **While conversational AI presents exciting possibilities, it doesn't eliminate the need for thoughtful visual design.** Even OpenAI's interface—despite being chat-first—incorporates visual elements like chat positioning, history, and prompts to enhance usability. These features underscore the enduring value of visual cues in guiding users and reducing cognitive load. The rise of AI is a call to reimagine UX design, as we know it today.