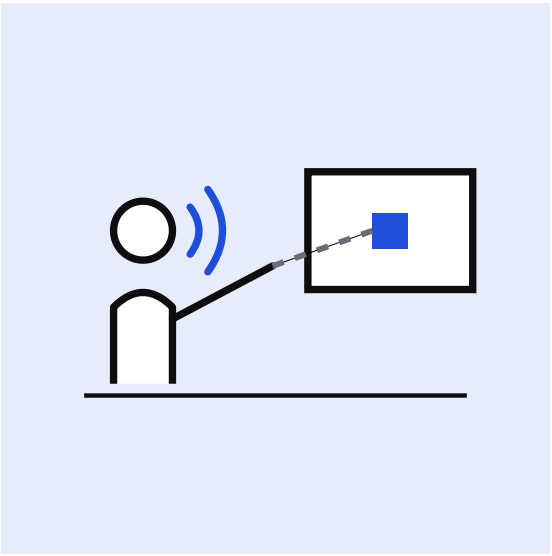
Specialty

Multimodal interaction

Designs interaction with systems that understand and respond through several channels at once, such as voice, gestures, touch or gaze, which can be combined or alternated.



In Spanish
Interacción multimodal

Origin
Bolt (1980); Oviatt (1999)

What problem it addresses

Every channel fails somewhere. Voice doesn't work in noise, a screen doesn't work while driving and gestures don't work with busy hands.

Principles

Each channel for what it does best

Pointing says where and speech says what, as in "put that there."

Always another way

If one channel fails or can't be used, the same action can be done through another.

Let people choose

Combining channels isn't forced; each person uses the one they prefer at each moment.

Applications in design

✓ Use it like this

Decide which channel suits each situation of use and always offer an alternative through another channel.

✗ Avoid

Relying on a single channel, such as voice, in noisy places or where speaking isn't appropriate.

👁 Don't fall for it

Check that the experience works with a single channel, for people who can't see, hear or move their hands.

Connections

Related to

- Accessible design
- Conversational design
- Voice UX
- Haptic design

Authors and works

1980	**Richard A. Bolt**	In his “Put-that-there” system, a person moved shapes on a large screen by saying “put that there” and pointing with their arm: the voice gave the command and the gesture, the place.
1999	**Sharon Oviatt**	Reviewed ten widespread but mistaken ideas about these systems and argued that, well designed, they let people express themselves better and more naturally.

Sources

Original sources

- Bolt, R. A. (1980). “Put-that-there”: Voice and gesture at the graphics interface. In Proceedings of SIGGRAPH '80 (pp. 262–270). ACM. View source (https://www.media.mit.edu/publications/put-that-there-voice-and-gesture-at-the-graphics-interface/)
- Oviatt, S. (1999). Ten myths of multimodal interaction. Communications of the ACM, 42(11), 74–81. View source (https://doi.org/10.1145/319382.319398)

Last reviewed: October 25, 2026

Atlas público de diseño, de Adriana Ojeda. Texto e ilustraciones bajo licencia CC BY 4.0.