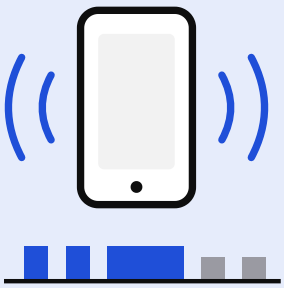
Specialty

Haptic design

Designs responses perceived through touch, such as vibrations, taps or resistance, so a device can inform and confirm without you having to look at the screen.



In Spanish
Diseño háptico

Origin
MacLean (2008)

What problem it addresses

The eyes are often busy, or the screen is small or out of sight. Touch is a free channel to alert, confirm or guide.

Principles

One meaning per pattern

Each vibration is always tied to the same thing, so it is learned as cause and effect.

Accompany, don't replace

What you feel matches what you see and hear in timing and intensity.

Little and brief

A short tap now and then informs; constant vibration is tiring and loses meaning.

Applications in design

✓ Use it like this

Use vibration to confirm an action, mark a limit or a step, or alert discreetly when you can't look.

✗ Avoid

Vibrating on every tap, or using the same pattern for a success and an error.

Don't fall for it

Let each person lower or turn off vibrations, and make sure everything still works without them.

Connections

Builds on

- Calm technology

Related to

- Accessible design
- Automotive HMI design
- Wearable design
- XR design (extended reality)
- Multimodal interaction
- UI motion design

Authors and works

2004	**Stephen Brewster and Lorna Brown**	Proposed “tactons,” structured tactile messages that combine rhythm, intensity, duration and body location, like icons for touch.
2008	**Karon MacLean**	Organized haptic design for everyday interfaces and separated skin touch from the sense of force and movement. She warned that touch only relieves the eyes if it lowers total effort.

Sources

Original sources

- MacLean, K. E. (2008). Haptic interaction design for everyday interfaces. Reviews of Human Factors and Ergonomics, 4(1), 149–194. View source (https://doi.org/10.1518/155723408X342826)
- Brewster, S. A., & Brown, L. M. (2004). Tactons: Structured tactile messages for non-visual information display. In Proceedings of the 5th Australasian User Interface Conference (AUIC 2004), CRPIT 28 (pp. 15–23). Australian Computer Society. View source (https://eprints.gla.ac.uk/3443/)
- Apple (2024). Playing haptics. In Human Interface Guidelines. Apple Developer. View source (https://developer.apple.com/design/human-interface-guidelines/playing-haptics)

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