

# BLE 6.0 Channel Sounding — Investor Infographic

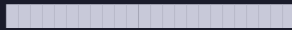
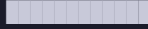


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See the visual infographic version: rendered at [html/drafts/BLE\\_CS\\_Investor\\_Infographic.html](html/drafts/BLE_CS_Investor_Infographic.html)

## The Opportunity in One Sentence

BLE 6.0 Channel Sounding delivers **UWB-class centimeter accuracy from a \$3 chip** — and BleedIO's hubless mesh is the only architecture where every node is simultaneously a tag *and* a ranging anchor.

## The Technology Leap

RSSI (BLE 4/5)		3–10 m accuracy	← industry standard today
AoA/AoD (BLE 5.1)		1–3 m	← needs antenna arrays
UWB		5–30 cm	← \$300–\$2K per anchor
BLE 6.0 CS		10–50 cm	← \$2 chip delta, no anchors

**The gap BLE CS closes:** from "which room" to "which side of the door."

## How It Works (3-Line Version)

- Phase sweep:** Tone sent across 80 BLE channels × 1 MHz; phase shift at each frequency encodes distance with ~1–3 cm precision
- RTT:** Sub-nanosecond round-trip timestamp; 0.5 ns resolution = 7.5 cm distance precision
- Multipath rejection:** 80-channel frequency diversity separates direct path from reflections — same math as FMCW radar, in a \$3 chip

## Competitive Moat

	BleedIO	Quoppa	Sewio/HID (UWB)	Kontakt.io
Accuracy (indoor)	<b>10-50 cm</b> (CS)	30-50 cm	10-30 cm	1-3 m
Infrastructure needed	<b>None</b>	Proprietary \$500-\$2K anchors	UWB anchors	WiFi gateways

CS-upgrade path	Drop-in chip swap	No BLE CS roadmap	Separate radio	No
ITAR-free	Yes	Yes	Partial	Yes
Node cost target	<\$100	\$500-\$2K	\$300-\$2K	\$150-\$300

**Key moat:** Competitors who built on gateway/anchor architectures cannot retrofit CS without replacing their entire infrastructure model. BleedIO's hubless mesh is CS-native — every node is already in the right place to be a ranging anchor.

## Product Roadmap

Phase	When	What
Now	2026	RSSI-based locMESH (~1.5 m). Shipping to customers.
CS Research Spike	H2 2026	Characterize CS in fire/warehouse/outdoor environments
CS Beta	H1 2027	Opt-in CS precision mode; nRF54LM20A hardware
CS Production	H2 2027	Standard feature; "CS Precision Mode" as upgrade tier
Marketing Push	2027	"Matches UWB at 1/100th the cost" — enterprise sales + PR

## Why Now

- **Bluetooth 6.0 ratified** November 2024
- **Nordic nRF54LM20A** (BleedIO's chip partner) entering production Q1 2026
- **HID acquired Sewio** (UWB RTLS) for undisclosed sum, Aug 2024 — validates precision RTLS as acquisition target
- **Silvus acquired by L3Harris for ~\$4B** — validates mesh networking market ceiling
- **BleedIO is 18 months ahead** of any competitor on CS-native mesh architecture

## The Investment Thesis in One Slide

*BleedIO is building the **only BLE mesh platform** that will deliver UWB-class accuracy (BLE 6.0 CS) without proprietary infrastructure — at a node cost 10–30× lower than any incumbent. When CS chips hit mass-market in 2026–2027, BleedIO flips from "good enough" to "definitively best" in every metric that matters to enterprise and defense buyers.*

