SmartLid

Automated, safety-monitored physical movement for computing devices — beginning with the laptop lid.

The next generation of computing devices will not only understand user intent — they will physically respond to it.

A patent-pending closed-loop control architecture for automated, safety-monitored physical movement of computing devices.

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Opening a laptop is invisible — until you can't do it.

Computing devices increasingly understand what a user wants, but physical interaction still depends on manual force. An open laptop left unattended exposes confidential data to anyone walking by. And for most people, it's simply friction: walk up with coffee in one hand and a phone in the other, set the laptop down, and it should just open.

The clearest version of this problem shows up in accessibility: hundreds of millions of people with limited hand strength, dexterity, or mobility face this daily, some resorting to workarounds as basic as gluing a ring onto the lid just to get a grip. It's the sharpest case of a problem every laptop user has — and the first place we're validating the product.

1.3B

people live with a significant disability worldwide — our beachhead validation market

Source: WHO, Global Report on Health Equity for Persons with Disabilities, 2023

Where the idea came from

Usman observed this pain directly — people improvising with rings on the lid, or paying to weaken their own hinges just to reduce the force needed to open the lid. That gap between what modern devices already sense and what they still can't do physically is the starting point for SmartLid.

02 · The Insight

Software got smart about intent. Devices still can't act on it.

Voice assistants, presence sensors, and wearables can now tell a laptop what the user wants. But turning that recognized intent into safe physical movement — without a person's hand on the lid — has been left almost entirely unsolved. Two attempts came close but stopped short:

Google US9823631B1

Motorized hinge patent, now expired. No closed-loop force monitoring or external-device command path.

Lenovo Auto Twist

Disclosed publicly in Sept. 2024. Relies only on the laptop's own built-in microphone — no external verified command, no obstruction-safety loop.

Apple US16/885045

Shape-memory-alloy hinge mechanism — a materials approach, not a control-and-safety architecture.

The insight: the missing piece isn't a stronger motor — it's a control layer that verifies a command on an external paired device, then executes physical movement under continuous real-time force/torque monitoring, with mechanical fail-safe if power or control is lost. That combination is the defensible core, not any single motorized hinge.

03 • Why Now

The pieces needed for this to work only came together recently.

Multimodal input

Voice, wearables and presence sensors now reliably signal user intent without a keyboard.

Contextual computing

Devices increasingly evaluate presence, state and context before acting.

AI-PC refresh cycle

OEMs are actively competing on new interaction models, not just chips.

Low-power embedded control

Cheap, small embedded controllers make closed-loop force monitoring viable in a hinge, not just a lab.

59%

of global PC shipments projected to be advanced AI PCs in 2026, up from ~39% in 2025

SmartLid does not depend on AI-PC adoption to work. The shift matters because it shows OEMs are actively investing in new interaction models — the exact budget line SmartLid fits into.

Source: Counterpoint Research

04 · What It Does

Intent becomes monitored physical movement.

1 · Command / Context

Voice · smartphone · wearable · presence · context

→

2 · SmartLid Control

Decision logic · authorized state change · safety rules

→

3 · Device Movement

Laptop lid / display — open · close · reposition

→

4 · Safety Feedback

Force · pressure · torque · resistance · obstruction

If movement becomes unsafe, the system dynamically adjusts, stops, or reverses execution. This is not a remote-controlled hinge — it is an integrated configuration-control and physical-safety architecture inside the device.

First implementation: automated laptop lid opening, closing and positioning — chosen because it validates actuation, sensing, control and fail-safe behavior on one reference platform, and gives OEMs something concrete to react to.

The laptop lid is the first proof point, not the boundary.

The control architecture — command verification, closed-loop safety monitoring, mechanical fail-safe — is not specific to a laptop lid. These are hypotheses for future validation, not commitments in the current roadmap.

TODAY — THIS ROUND

- Automated open
- Automated close
- Obstruction-safe positioning on one reference laptop platform

HYPOTHESES FOR NEXT ROUNDS

- Privacy / lid-close-on-walk-away mode
- Meeting / do-not-disturb positioning
- Docking-station auto-alignment
- Ergonomic display repositioning
- Enterprise remote-managed configuration

06 · Market Opportunity

A global OEM licensing opportunity, built bottom-up from notebooks.

219.7M	1%	OEM scale
notebooks shipped worldwide in 2025	of 2025 volume = 2.2M devices	one platform integration reaches a device family, not one user at a time

Source: Omdia, 12 Jan 2026 — 219.7M notebook shipments in 2025. The 2.2M figure is a simple 1% volume scenario, not a revenue forecast or claimed market share.

Validation path, not a claimed TAM yet

Hands-free interaction → premium device differentiation → accessibility as the first validated use case → other movable computing-device components. Per-unit licensing economics depend on OEM royalty benchmarks that are still being validated — we are not presenting a bottom-up revenue number until that component is verified.

The notebook is our validation platform. The long-term opportunity extends to other computing devices with movable physical interfaces — a direction to prove through engineering, not a claim we're making today.

07 · Return Potential

What a single OEM design win is worth.

This is an illustrative scenario built on conservative, pre-grant licensing assumptions — not a forecast or a projection we are committing to.

2.2M units

1% of 2025 global notebook shipments (Omdia) — a single mid-size OEM design win

$1–$3 / unit

Conservative fixed per-unit royalty. Established electronics patents license at 4–6% of net sales; first-time, pre-grant licensors typically settle 40–60% below that, which this range reflects

$2.2M–$6.6M

Annual licensing revenue at 1% shipment penetration, before any second OEM or broader-device expansion

This is one OEM, one product line, at 1% shipment share — not the ceiling. A second OEM, higher penetration, or expansion beyond the laptop lid moves this into double-digit millions annually. None of this is achievable without the patent granting and a working, safety-validated prototype — which is exactly what this round funds.

Sources: Omdia notebook shipment data (cited above); Stanzione & Associates and Beyond Elevation, 2026 patent royalty rate benchmarks for electronics licensing

What Lenovo, Dell, HP or Asus actually get for paying.

Premium differentiation

A shippable, demoable feature in an OEM keynote — not a spec-sheet number.

Accessibility compliance

Growing regulatory and procurement pressure (e.g. public-sector accessibility requirements) rewards a documented, working accommodation.

AI-PC interaction story

A physical answer to the same "what can this PC now do" question OEMs are already spending marketing budget on.

Enterprise security

A closeable-on-presence-loss lid is a tangible privacy feature for enterprise IT buyers, not just a consumer nicety.

Higher ASP justification

A visible hardware differentiator supports premium SKU pricing in a category where most differentiation is invisible (chipset, RAM).

Low integration risk

Licensed control architecture, not a from-scratch R&D program — OEM engineering effort is adaptation, not invention.

These are the OEM-side value drivers the licensing thesis depends on — to be validated directly with OEM engineering and product teams during this round, not assumed.

09 · Business Model

OEM integration and licensing — not a consumer hardware business.

Validate

Reference architecture, functional prototype, priority use-case discovery.

Demonstrate

OEM-ready technical demonstrator and integration package.

Integrate

Adapt the architecture to a selected device platform with an OEM or development partner.

Commercialize

Test platform licensing, integration agreements and other OEM-aligned commercial structures.

Why an OEM-led model?

This avoids the capital intensity of building a laptop brand and aligns SmartLid with manufacturers who already control industrial design, supply chains, certification and distribution. Commercial structure is not yet fixed — terms will be validated through OEM discovery and negotiated platform by platform.

Priority established. Applications pending in Belgium and the US.

BELGIUM

BE2026/0042
Priority date: 13 March 2026
Patent pending

UNITED STATES

US Provisional No. 64/129,698
Provisional filed
International (PCT) filing planned before the priority deadline

Pending claim architecture

- Processing-and-safety module + execution mechanism for configuration modification
- Explicit, implicit, sensor-derived, contextual, predictive and absence-of-input command conditions
- Force, pressure, torque or resistance detection with dynamic modify / stop / reverse response
- Method claim directed to configuration modification under continuous real-time monitoring

Patent applications are pending; final claim scope will depend on examination. Formal freedom-to-operate review is included in the next de-risking phase.

Why this is hard to copy quickly — and where it could lead.

Competitive moat

- Claim architecture spanning command verification, safety monitoring and fail-safe logic together, not any single element
- External-device command verification, distinct from both expired and current competing approaches
- Integration know-how that accumulates with every OEM engineering conversation

Risk reduction so far

- Patent filed — priority secured
- Control architecture defined
- Prior-art landscape mapped

Next to de-risk

- Working prototype
- Safety-loop testing
- OEM engineering feedback
- PCT filing

Illustrative strategic landscape

Notebook OEMs: Lenovo, Dell, HP, Asus, Acer

Component & platform players: Intel, Qualcomm, AMD, Microsoft

None of these companies have been approached or expressed interest. This is an illustrative map of who a licensing or acquisition conversation could plausibly involve — not a pipeline or a solicited list.

Moving fast on the things that don't require a lab yet.

Done

- Belgium and US patent filings secured, priority date locked
- Prior-art landscape mapped against Google, Lenovo and Apple's closest attempts
- Reference control architecture and claim strategy defined
- 12-month engineering validation roadmap built

Not yet — and why that's the honest picture

- No working prototype or revenue yet — hardware, not software, and pre-seed capital is what funds the build
- No signed OEM or accessibility-org LOIs yet — outreach to assistive-tech stakeholders is the first use of funds
- Broader OEM relevance beyond the laptop lid is a hypothesis to validate, not a claim we're making today

We're not overstating traction to look ready. The pre-seed round exists precisely to close this gap: build the prototype, validate the safety loop, and get the first real usage signals from accessibility users and OEM engineers.

A founder who lived the problem — building out the team to build the product.

USMAN ESAMERZAEV — FOUNDER & INVENTOR

Originated SmartLid after observing first-hand how people with limited hand strength or dexterity cope with laptop lids — improvised grips, weakened hinges, and the privacy risk of a laptop left open unattended. Leads IP strategy, product direction and commercial development.

EMIN — PROJECT SUPPORT

Supports communications, technical coordination and execution of the project roadmap.

The gap we're addressing head-on: no technical co-founder yet

Neither founder currently holds a mechatronics/embedded-systems background in-house. 45% of the pre-seed round is allocated to mechanical, embedded and controls engineering hires — the first priority of this raise is bringing that capability in-house, not working around its absence.

14 · The Ask

Pre-seed round. 12 months. A working, safety-validated reference prototype.

M1 · Design

Actuation selection, hinge integration, sensing stack, control architecture

M2 · Prototype

Automated opening, closing, positioning on a reference device

M3 · Safety

Obstruction response, resistance monitoring, stop/reverse, fallback behavior

M4 · OEM-Ready

Engineering demonstrator, technical package, OEM technical discovery

Use of funds

- 45% — mechanical, embedded & controls engineering
- 20% — prototype components, tooling & test equipment
- 15% — safety validation & specialist testing
- 10% — IP / FTO and filing strategy
- 10% — OEM & accessibility-stakeholder discovery, operating reserve

Parallel market validation track

OEM product/engineering discovery → accessibility user discovery → assistive-technology stakeholder validation → documented integration-interest signals.

SmartLid

Make physical device configuration controllable, adaptive, and safely executable — starting with automated laptop lid control, with a validated path to other movable computing-device interfaces through OEM integration.

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