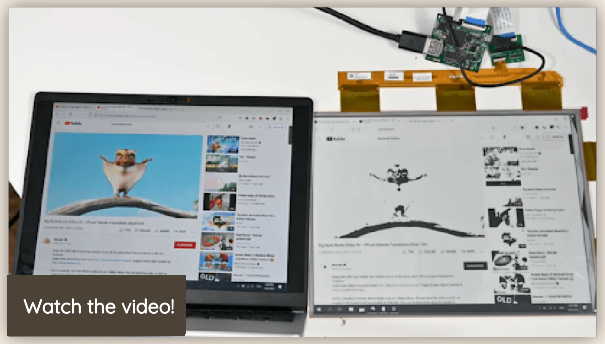

# Reimagining Personal Computing with E ink

Alexander Soto, Founder
modos.tech • alex@modos.tech

# Re-imagining personal computing with a focus on creating calm, inclusive, and humane computing.


# Meet the team

Wenting

Lead EPDC Developer

Brodie

CAD / Manufacturing

Michael

Software Architecture

Alex

Founder

# Thank you to our Community and NLnet Foundation

**300+**

contributors

**5k+**

subscribers to mailing list

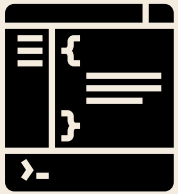
**3k+**

survey testimonials emphasize the need for healthier options


# Community Survey Findings

Reading
65%

Writing
60%



Coding
51%

Focused
41%

*"I lose hours and days and weeks of my life getting sucked down rabbit holes of entertainment content, and often miss deadlines or whole work sessions because my work and my play are a button away and the play buttons are so bright and colorful. It feels like my brain can't focus or rest at the end of the day while I'm staring at a bright screen for hours..."*

*"Eye strain is a real problem. Using an e-ink display for creative writing would be much more pleasant than a standard display. I'd love to see e-ink technology continue to advance and become more accessible and applicable..."*

*"I have to use technology extensively for my career and I get issues on commercial screens (headaches, eye strain, overstimulation). I think e-ink is a much healthier alternative for everyone as it is a more natural and healthy way to use technology..."*

*"I've been programming since 11, now 33 years old. My eyes hurt, even though wearing blue light filtering glasses, go outside regularly, etc. I have been wanting this for years..."*

# Desire for a Balanced Digital Life

- Reducing screen time on social media/entertainment.
- Digitally unplug and spend more time outdoors, away from screens.
- Seeking less visually stimulating digital environments.
- Reducing digital clutter and minimizing distractions.

# Health and Comfort Concerns

- Eye Fatigue and strain from prolonged screen exposure.
- Specific Health Issues:
  - Myopia
  - Epilepsy
  - Light sensitivity
  - Headaches
  - Migraines
  - Traumatic brain injury
  - Post-concussion syndrome

*"All of us are temporarily able-bodied and at some point in our lives, will face new kinds of exclusion as we age, when we design for inclusion, we are designing for our future selves."*

- Kat Holmes

Mismatch: How Inclusion Shapes Design

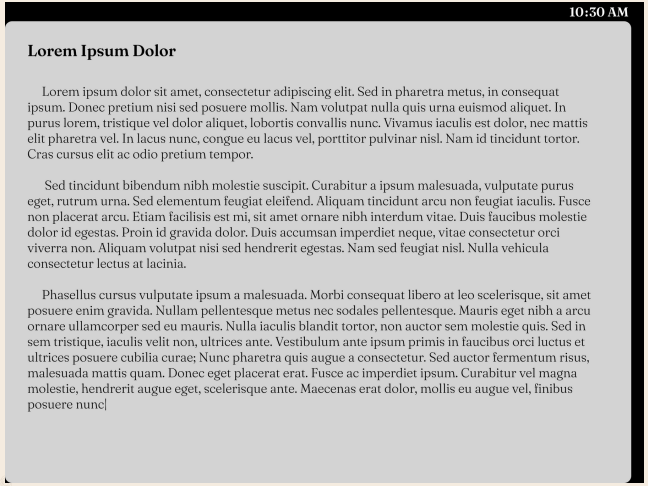
# There's a need for...

- Creating technology that satisfies our essential needs while protecting our well-being.
- Redefining the role of our digital devices to foster a healthier, balanced life.
- Creating a new class of devices, built from scratch, to embody the principles of 'humane technology' through hardware and software design.

# What about Software?

- How can we be productive in a "calm" world?
- Can work by synced in the cloud without interrupting focus?
- Can we collaborate without notifications?
- Can we scale minimalist UI to more than just reading and writing?

# First: The Basics

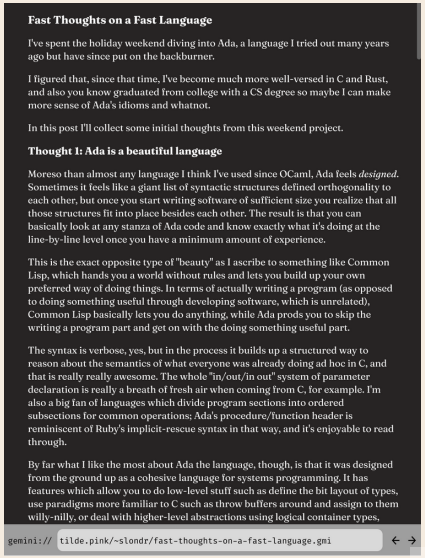



## Write

a simple text editor for prose & code

## Reference

an exploration into "browsing for information" using Gemini



# How Do We Make This Scale?

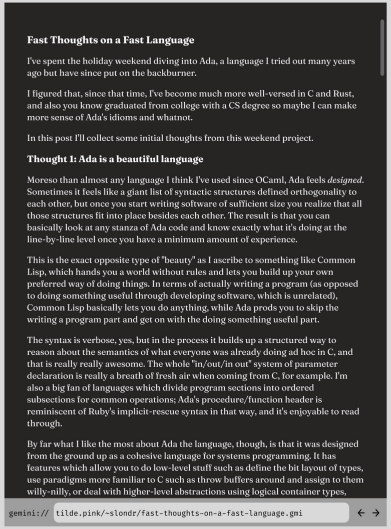
# Meet Modalix

A core framework in development designed to tailor applications and documents for use across various devices and end users' needs.

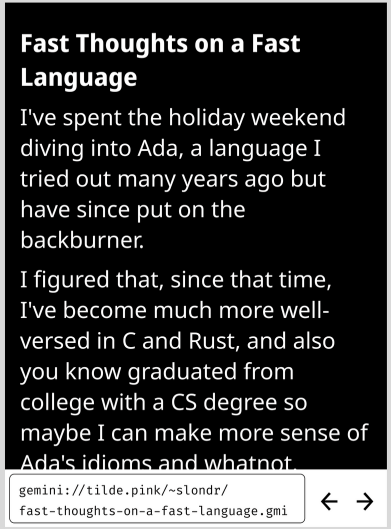
**Source**

```
# Fast Thoughts on a Fast Language
I've spent the holiday weekend diving into Ada, a language I tried out many years ag
I figured that, since that time, I've become much more well-versed in C and Rust, an
In this post I'll collect some initial thoughts from this weekend project.
## Thought 1: Ada is a beautiful language
Moreso than almost any language I think I've used since OCaml, Ada feels /designed/.
This is the exact opposite type of "beauty" as I ascribe to something like Common Li
The syntax is verbose, yes, but in the process it builds up a structured way to reas
By far what I like the most about Ada the language, though, is that it was designed
## Thought 2: Ada is incredibly difficult to get started with
I've spent nearly as much time trying to compile some tool or toolchain or solve som
I use Arch Linux, btw. Arch packages the GCC front-end for Ada, GNAT, as the gcc-ada
Unfortunately, every other Ada program ever written uses something called gprbuild, (
## Thought 3: Ada is fast
I mean, it's as fast as C (it compiles to C object code and goes through all the opt
But like, I mean, I'm writing naive algorithms in Ada which are beating optimized (y
## Thought 4: Where I'm going next
I have a few ideas for projects to try out maybe next weekend. I do really like Ada
* Erlang NIF or port in Ada
* Port some more of my C programs into Ada to find new edge cases in the language, l
* Do something with Ada's built in signal handler system, maybe try getting it running on a r
```

**Minimalist Reader**




**Low-Vision Reader**

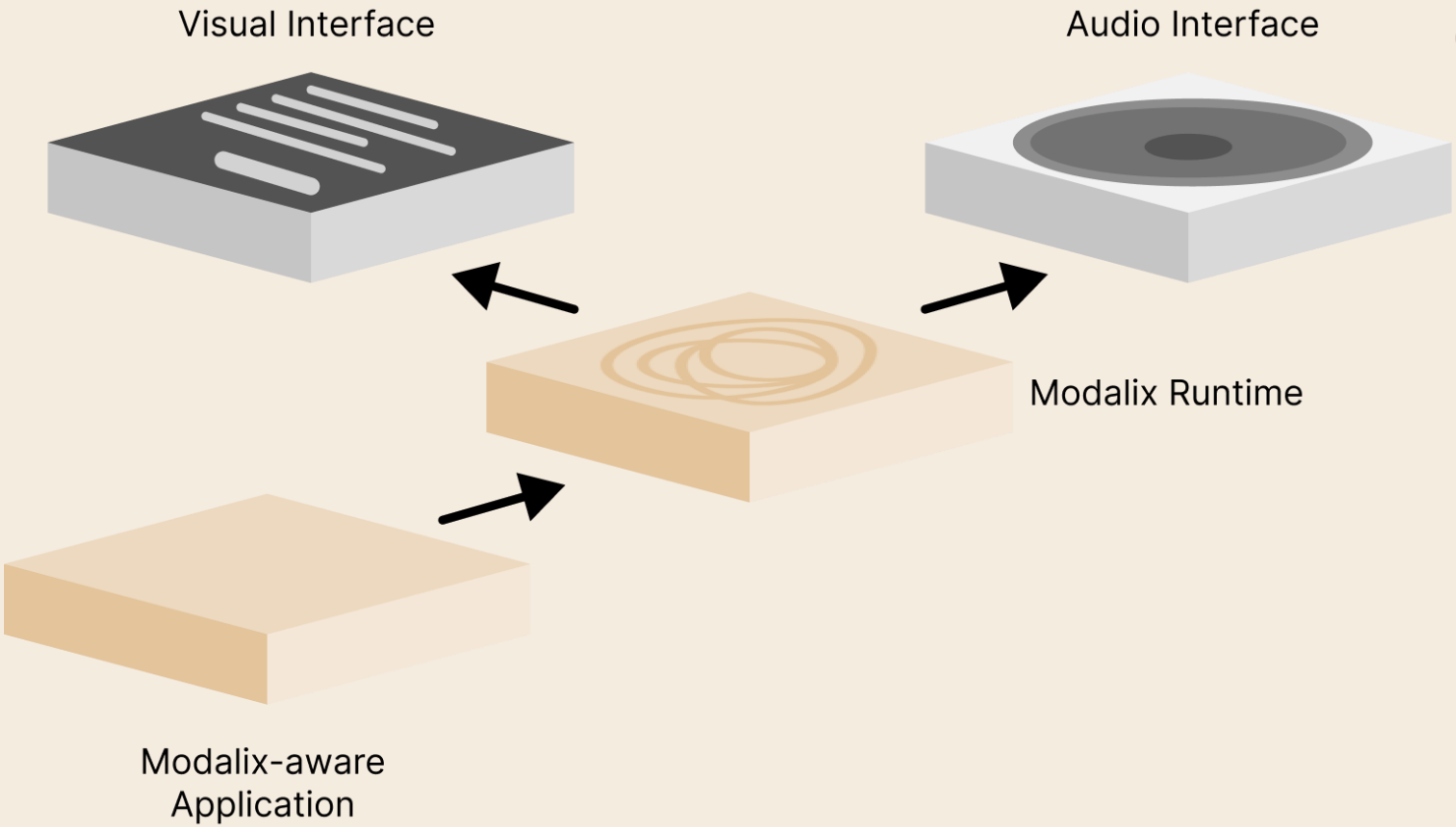


# Modalix

- Adapts the interface to user preferences, including dynamic adjustments to meet specific requirements.
- Utilizes a semantic model to guide adaptation across different modalities, such as screen types, operating systems, devices, and input methods.
- Developers and users can extend and enhance the experience for each modality.

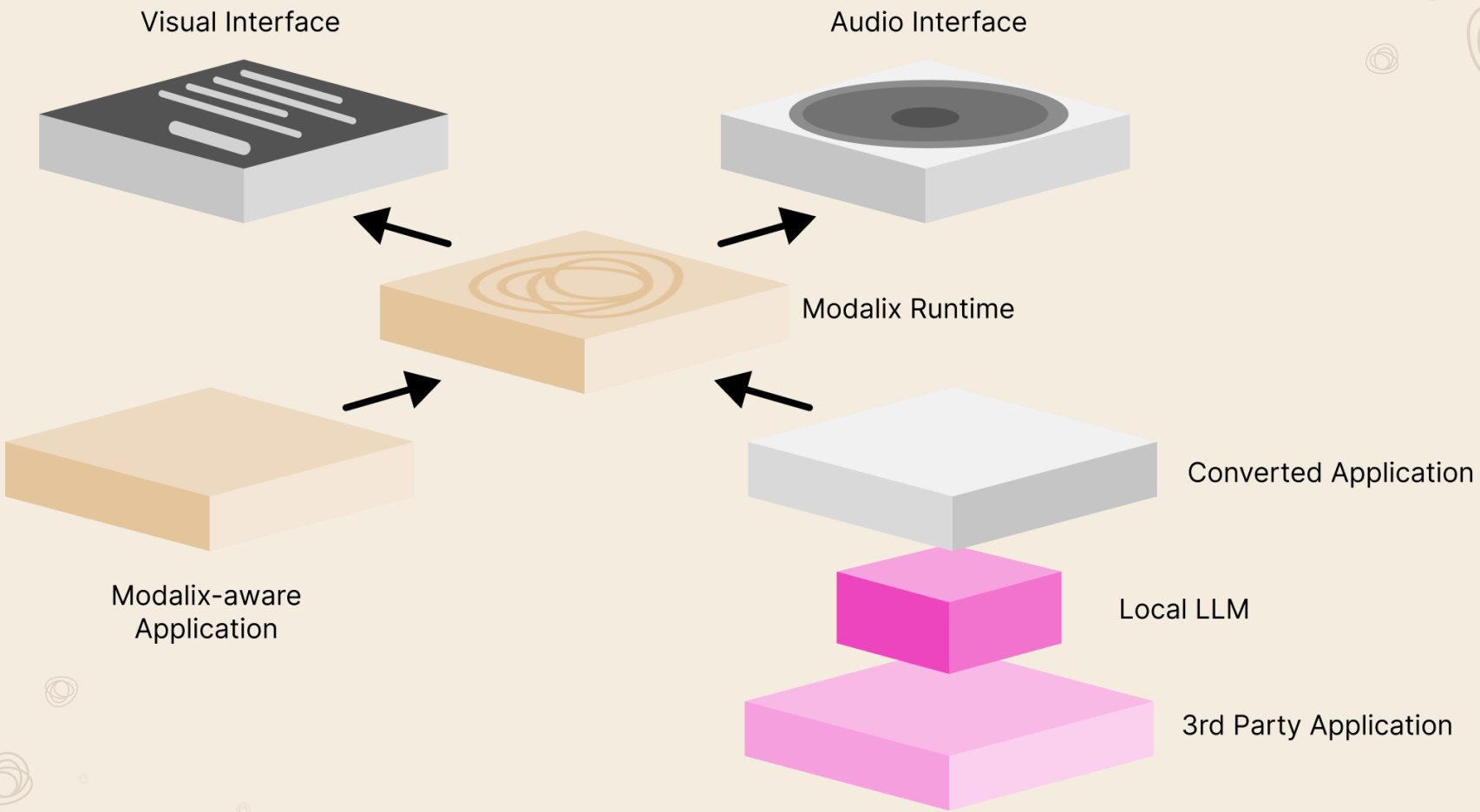
# Approaches

1. Re-structure the inherent complexity of user interfaces
2. Moving complexities associated with specific modalities, higher in the stack to prevent them from affecting each other


Visual Interface
Audio Interface
Modalix Runtime
Modalix-aware
Application

# Challenges

1. The complexity in the semantic representation of user interfaces.
2. Backward compatibility with existing applications


Visual Interface
Audio Interface
Modalix Runtime
Converted Application
Modalix-aware Application
Local LLM
3rd Party Application

# Next Steps

1. Crowdfunding Campaign
2. Get Involved with Modos


https://www.modos.tech • alex@modos.tech