

Carp

A Language for the 21st Century

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Port Zero

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Prologue

Obligatory Starter

- ▶ Carp standard library maintainer
- ▶ CTO @ Port Zero
- ▶ Secretly a turtle

This is a chess-timer talk. You're welcome to ask questions at any time.

I can't promise that I'll be able to answer all of your questions.

I probably won't get through my material.

I. Syntax & other trivialities

```
; (type f)
; f : (Fn [(Ref (Array a)), Int, Int] a)
(defn f [x y z]
  @(Array.nth x (* y z)))
```

Listing 1: A silly Carp function

```
(deftype (AssocArray a b) [lst (Array (Pair a b))])
```

Listing 2: An associative array type, simplified.

II. Semantics & meaning

The goods

We have (non-hygienic) macros, type inference, and borrow checking.

The emphasis of the design is on simplicity while being pragmatic.

What we're still tuning

We're working on good autogenerated documentation, dependency management, lifetimes, and, generally, tooling.

Why?

There's a vast amount of information flowing through the compiler, most of it implicit.

Reducing cognitive load is useful, but explorability is key.

III. Recap

Carp is early stage software.

- ⇒ Small community, few packages
- ⇒ We're less than a handful of maintainers
- ⇒ Insufficient documentation
- ⇒ May change under your feet
- ⇒ May blow up in your face!

Our first stable release—0.3.0—was released!

References

- ▶ Github: <https://github.com/carp-lang/carp>
- ▶ Erik: <https://github.com/eriksvedang>
- ▶ Chat: <https://gitter.im/carp-lang/carp>
- ▶ Docs: http://carp-lang.github.io/Carp/core/core_index.html
- ▶ Blogs: <https://blog.veitheller.de> (sorry about that)
- ▶ Slides: https://github.com/hellerve/carp_talks
- ▶ This talk, but different, shorter, and at clojuTRE:
<https://www.youtube.com/watch?v=BQeG6fXMk28>
- ▶ Carp 0.3.0:
<https://github.com/carp-lang/Carp/releases/tag/v0.3.0>

Thank you!

Questions?

Slides at https://github.com/hellerve/carp_talks