#### Liquidshop 5 Where we at with liquidsoap!

Romain Beauxis, June 11, 2025

• What happened since liquidshop 4?

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- Roadmap

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- Roadmap
- Questions?

- Rewrite the streaming loop
- Rewrite the clock implementation
- Take advantage of OCaml 5 concurrency
- Address standard library performance issues
- Add developer tooling: linter/prettier, syntax highlighting, etc.
- Release liquidsoap 2.3.x
- Update the liquidsoap book

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### Liquidsoap 2.3.x release!

- November 26, 2024: Release 2.3.0 🤤
- February 5, 2025: First bug fix release: 2.3.1
- April 2, 2025: Second bug fix release: 2.3.2
- May 16, 2025: Third bug fix release: 2.3.3



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### Liquidsoap 2.3.x release!

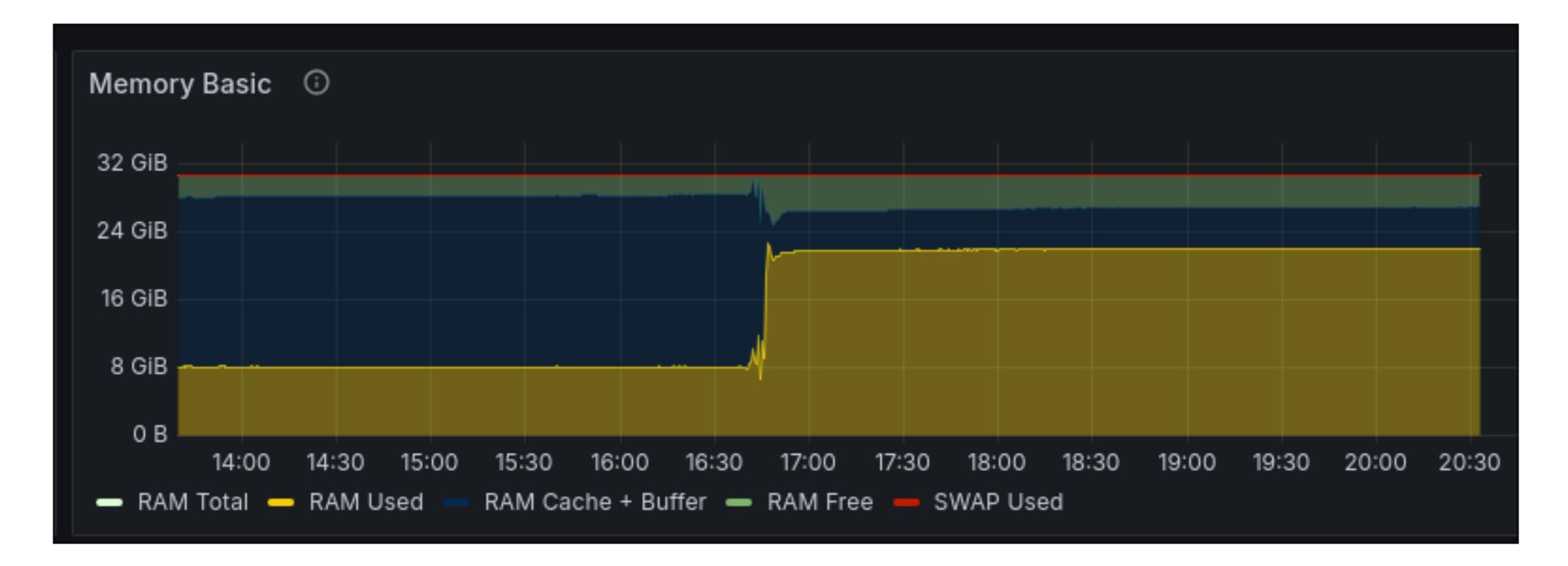
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#### Stabilization takes time!



• Switch to OCaml 5

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**Oliquidsoap-ocaml4.14.2-x86\_64-2.3.3-r0.apk** 

Viliquidsoap-ocaml4.14.2-x86\_64-2.3.3-r0.config

Oliquidsoap-ocaml4.14.2-x86\_64-minimal-2.3.3-r0.apk

Viliquidsoap-ocaml5.3.0-aarch64-2.3.3-r0.apk

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• Switch to OCaml 5

#### Generate 0.02s of content, send it to all outputs

start =  $t_{\rm s}$ 

 $t_e - t_s < 0.02s$  : sleep 😴

# frame duration = 0.02sCPU: end = $t_{\rho}$

 $t_{\rho} - t_{s} \ge 0.02s$  : we're late!

• Switch to OCaml 5

# Generate 0.02s of content, send it to all outputs

# Every 0.02s, we generate content that takes up a LOT of memory

# frame duration = 0.02s

• Switch to OCaml 5

#### Generate 0.02s of content, send it to all outputs

#### **Every 0.02s, we generate content** that takes up a LOT of memory

## frame duration = 0.02sCPU:

Most of that content can be disposed after 0.02s

• Switch to OCaml 5

#### Generate 0.02s of content, send it to all outputs

#### **Every 0.02s, we generate content** that takes up a LOT of memory

#### The OCaml 5 GC struggles to keep up with this memory...

## frame duration = 0.02sCPU:

Most of that content can be disposed after 0.02s

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# Move content memory outside of the OCaml memory stack? 😌

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FFmpeg: reference counting: +-++

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FFmpeg: reference counting: +-++

Problem: how to enforce a strict ownership policy in OCaml contexts

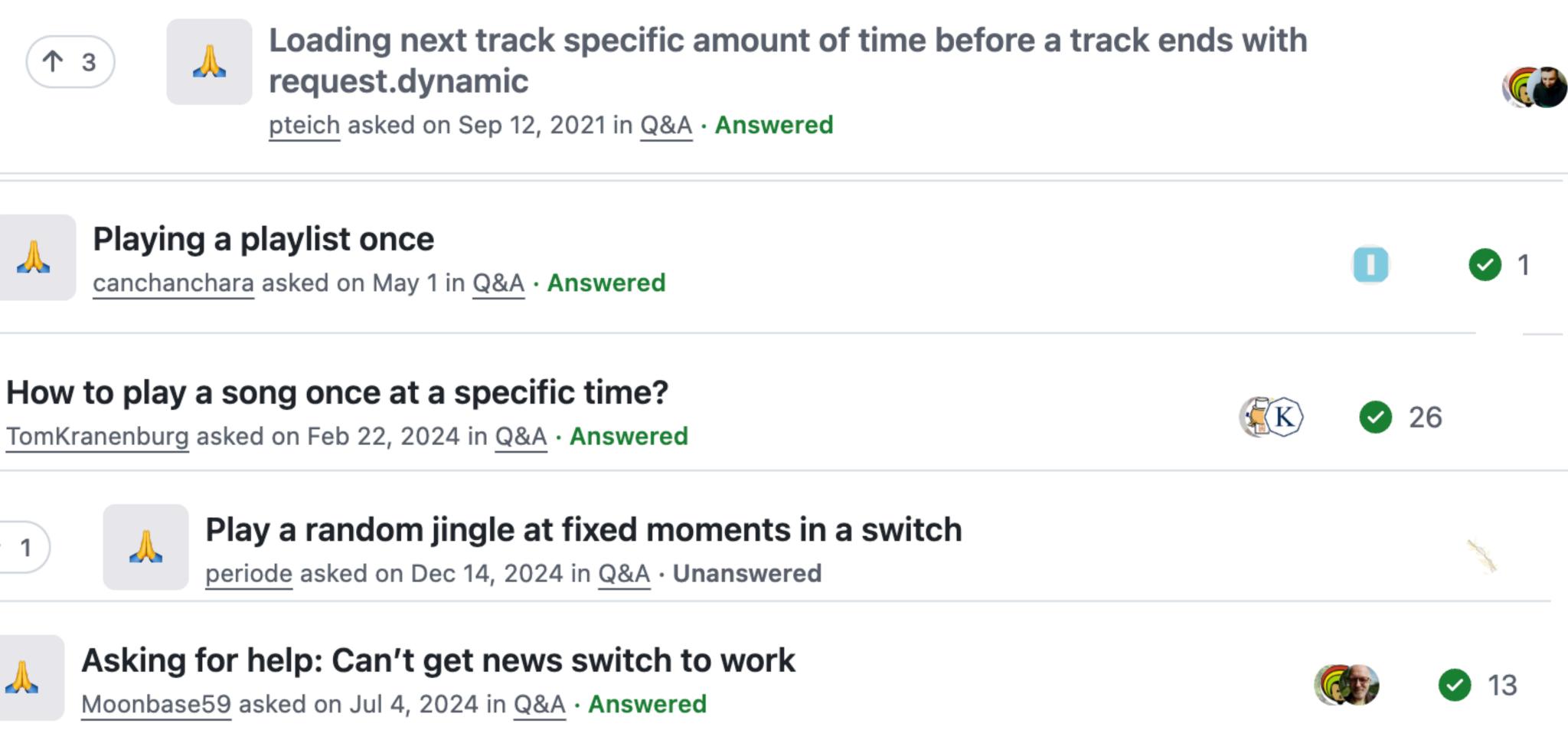
- Switch to OCaml 5
- Simplifying our APIs

- Switch Λ 3
- Simpli



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#### We need to better understand our users needs!



- Switch to OCaml 5
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## We need to better understand our users needs!

#### Write good low-level APIs 😨

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#### We need to better understand our users needs!

#### Write good low-level APIs 😨

"Simple things should be simple but complex things should be possible"

- Switch to OCaml 5
- Simplifying our APIs
- Adding new functionalities

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## Native PipeW More NDI s





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#### WHIP/WHEP (WebRTC) support?





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# Native PipeWire support? More NDI support? WHIP/WHEP (WebRTC) support? - FFmpeg





- Switch to OCaml 5
- Simplifying our APIs
- Adding new functionalities
- Fixing existing functionalities!

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- Switch to OCaml 5
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- Growing our community!

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vitoyucepi 5 days ago

In order to triage the issue, I need to ask you about the problem because it's difficult to make assumptions. For example:

i have a problem with rendering of text.

What kind of problem do you have, given that the screenshot shows a bunch of tofu symbols, so I asked what was written there?

- Adding new functionalities
- Fixing existing functionalities!
- Growing our community!

(	Collaborator	•	
	conaborator		





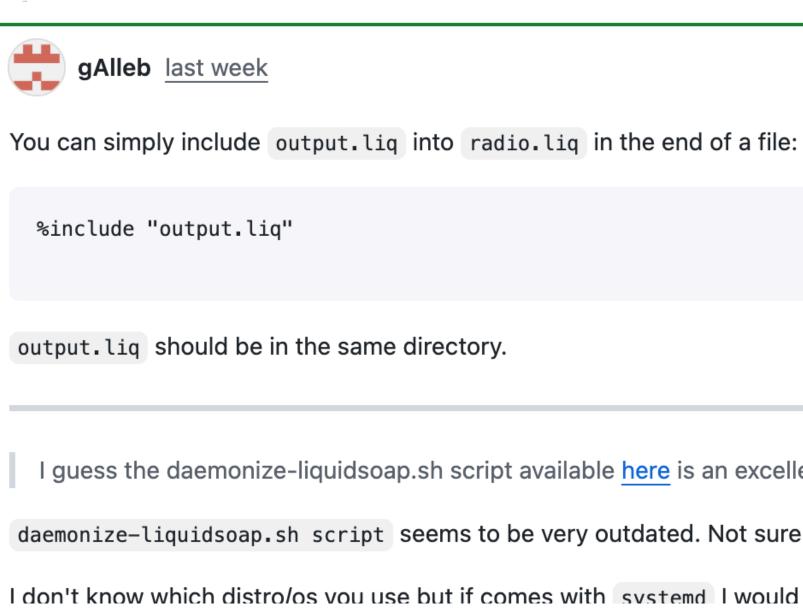
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Collaborator

edited

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D

I guess the daemonize-liquidsoap.sh script available here is an excellent starting point.

daemonize-liquidsoap.sh script seems to be very outdated. Not sure that it's a good idea to use it.

I don't know which distro/os you use but if comes with systemd I would recommend using it to control your liquidsoap instance:

- Switch to OCaml 5
- Simplifying our APIs
- Adding new functionalities
- Fixing existing functionalities!
- Growing our community!

#### The Liquidsoap book



Samuel Mimram and Romain Beauxis

- Switch to OCaml 5 4426
- Simplifying our APIs
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- sh-3.2\$ git shortlog -s -n | head -11
  - Romain Beauxis
  - Samuel Mimram
  - metamorph68@aec24677-d710-0410-a355-ac75e2bdf181 dbaelde@aec24677-d710-0410-a355-ac75e2bdf181 smimram@aec24677-d710-0410-a355-ac75e2bdf181 David Baelde renovate[bot] Vito Jonas L
  - Martin Kirchgessner
  - Tony Miller



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# How should we keep in touch?

#### **Questions?**