Future of MediaWiki

A sustainable platform to support
a collaborative user base
and billions of page views

Birgit Mueller

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MediaWiki ...

- has been developed as the software for Wikipedia > 20 years ago
- powers all of the Wikimedia projects and is used outside of WM
- shapes the workflows on the wikis – and vice versa
- runs in own data centers and enables content delivery across the world



https://wikitech.wikimedia.org/wiki/Template:ClusterMap



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MediaWiki needs to support and scale for:

- More than **25 billion global page views** per month
- More than **50 million edits per month**
- Open content in **hundreds of languages**
- A **large collaborative contributor base** of editors and many technical contributors

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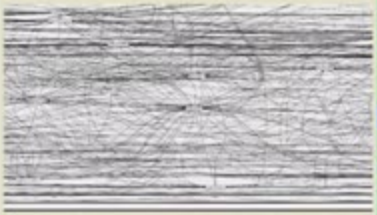




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MediaWiki ...

- Is a large, monolith code base and entangled system.
- Understanding the system's behavior is hard, making code changes is hard, onboarding people is hard.



Dependency graph of first level namespaces in MediaWiki

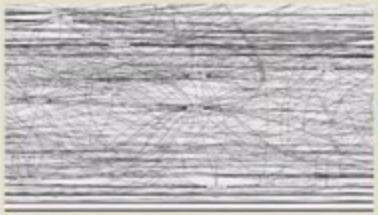


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A sustainable future

MediaWiki, the software platform and interfaces that allow Wikipedia and other projects to function, needs ongoing support for the next decade in order to provide creation, moderation, storage, discovery, and consumption of open, multilingual content at scale.

What decisions and platform improvements can we make to ensure that MediaWiki is sustainable?

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Year One Goals (July 2023 - June 2024)

- Establish product leadership and new engineering group for MediaWiki
- High level product strategy
- Progress on key multi-year initiatives to increase sustainability of the platform
- Enable more people to contribute to MediaWiki core
- Resolve open questions, from release to stewardship

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Turning lessons learned into actions
(and first successes)



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Keep

We made stable technology decisions that enabled us to scale for a top website and kept everything running

Example: Migration of MediaWiki to **Kubernetes**

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Change

MediaWiki is a large, monolith code base and entangled system.

Read: Unraveling complexity: Mapping MediaWiki software components into user-driven workflows



Excerpt from mapping exercise for *"An unregistered (not yet temporary) user edits existing wikitext content (fixing typo) on desktop"*



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Change

We need more people who can work on key areas of MediaWiki to ensure the sustainability of the software. At the same time, it is hard to onboard in MediaWiki.

Read: Contributor retention and growth (WE3.2, FY 23/24)

View: MediaWiki Introduction 2023

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	MediaWiki Core		CentralAuth	
	July 1, 2022 - June 30, 2023	July 1st, 2023 - June 30, 2024	July 1, 2022 - June 30, 2023	July 1st, 2023 - June 30, 2024
Authors > 5 changesets	70	88	5	15
Total number of authors	194	216	32	38
Number of changesets	4687	5494	121	326



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Design goal

Enable the creation, moderation, storage, discovery and consumption of open, multilingual content **at scale**, while protecting the privacy of its users.

Manual:What is MediaWiki? does describe some of that.

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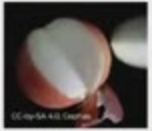
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Product focus areas [V2]



Sustainability

Increase sustainability of the MediaWiki platform (people and code) to ensure the software serves us well as the essential platform for Wikipedia and other key needs. Release is a part of this.



Core capabilities and concepts

Define and evolve architecture of the core software to meet current and future needs of open knowledge production and encyclopedic content.



Curated pathways

Define and evolve the pathways to expand and customize MediaWiki to clarify and streamline feature development, and empower technical contributors.



Design System

Provide a comprehensive, reusable, extensible way to design and build front ends on Wikimedia platforms



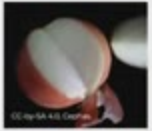
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Food for thought

The vast variety of use cases MediaWiki tried to support made it difficult to focus on what we're designing for. This resulted in us missing opportunities to evolve core, and a focus on building extensions.

Ultimately, we built the new on top of the old, instead of evolving the core platform.

Example: The core functionality of Wikidata is Wikibase, which is an extension.

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Knowledge Platform in FY 24/25:
MediaWiki platform evolution to better serve Wikipedia's core needs (WE5) + improved workflows and services to enable Wikimedia's developers (WE6)

5.1	Improve sustainability of the MediaWiki platform • APIs • Authentication • Parser Unification • Observability
5.2	Simplify and streamline feature development • Hooks/extension registry • Notifications • Moving towards more modularity in core
5.3	Support current and future needs of encyclopedic content • Async parsing

https://meta.wikimedia.org/wiki/Wikimedia_Foundation_Annual_Plan/2024-2025/Product_%26_Technology_OKRs#WE_KRs



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Thanks for listening.

Say Hi at the MediaWiki table:

- Thurs 11-12:30
- Friday 11-12:30

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