

Real-Time Collaborative Editing

C. Scott Ananian, Pau Giner, David Chan, James Forrester
Wikimedia Foundation

With thanks to [Dario Taraborelli](#), [Ori Livneh](#), and [Erik Zachte](#).

Wikimania 2017
August 12, 2017

What are we doing here?

What are we doing here?

- Lots of talk among developers about technical mechanisms for real-time collaboration.
- Very little talk about the social aspects or impact on community.
- Not much dialog between developers and editors and readers.
- Let's start to fix that!

Let's discuss (#1)

What we do now:

- How we find collaborators.
- How we find out about new stuff.
- How we coordinate.
- What works well, and...
- What we'd like to fix.

Some designs and ideas

N.Agas starts a new article and asks other members of the Astronomy WikiProject to join editing together.



WikiProject

Astronomy

Welcome to the astronomy WikiProject! If you enjoy gazing at the night sky, watching the Moon, stars and planets, or reading about the latest astronomical discoveries, then this is the project for you.

+ New activity

Activity

New articles

Tools

Today



Io (Moon)

Galilean moon of Jupiter

5 editors woking on it

Join the session

12 March



Curiosity → Curiosity (Rover)

Car-sized robotic rover exploring Gale Crater on Mars.

Redirect

Discussion

15 March



Pillars of Creation

astrophotograph

Proposed deletion

Discussion



120 Members

N.Agas

2743 Wikipedia

2 min. ago



Wayne Milk

Callisto (moon)

3 hours ago



Hal Nine K

Callisto (moon)

5 days ago



Mentoring

Carl

Io (moon)

2 min. ago



Anna Wong

Io (moon)

4 days. ago



Jules-Tr

Curiosity (rover)

15 days ago



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+ New activity


Topic 274301 Wikipedia Tools


Work on Let's expand this article

Invite Astronomy YuriGgr

[Start editing session](#) [Join the session](#)

12 March  [Curiosity](#) → [Curiosity \(Rover\)](#)
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[Redirect](#) [Discussion](#)

15 March  [Pillars of Creation](#)
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 120 Members

N.Agas 2743 Wikipedia 2 min. ago	
Wayne Milk Callisto (moon) 3 hours ago	
Hal Nine K Callisto (moon) 5 days ago	

▼

Mentoring

Carl lo (moon) 2 min. ago	
Anna Wong lo (moon) 4 days. ago	
Jules-Tr Curiosity (rover) 15 days ago	

Jane joins the session to edit “274301 Wikipedia” (asteroid) in real-time mode

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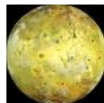


274301 Wikipedia

Main belt asteroid · Let's expand this article

New edit session

Join the session



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Jane joins the session to edit “274301 Wikipedia” (asteroid) in real-time mode

The screenshot shows a web browser interface for editing a Wikipedia article. At the top, a green banner indicates "One new edit by WayneMilk" and provides links for "View recent edits" and "Pause live updates". The article title is "274301 Wikipedia". The main text reads: "274301 Wikipedia (provisional designations: 2008 QH₂₄, 2007 FK₃₄, 1997 RO₄) is a main belt asteroid. It was discovered by the Andrushivka Astronomical Observatory in August 2008. The asteroid was named after the online encyclopedia Wikipedia in January 2013." Below the text is a section header "D". The browser's editing toolbar is visible at the top, including buttons for bold, italic, underline, list, and link, as well as a plus sign for additional options. On the right side of the page, there are icons for user profile, chat, and a clock.

Other users add content to the article at the same time. Jane wants to find out who they are ..

The screenshot shows the top portion of a Wikipedia article in edit mode. At the top, there is a navigation bar with a close button (X), the text 'Editing 274301 Wikipedia', and various editing tools (Bold, Italic, Underline, Bulleted list, Numbered list, Link, Image). Below this is a green status bar indicating 'One new edit by WayneMilk' and buttons for 'View recent edits' and 'Pause live updates'. The main title of the article is '274301 Wikipedia'. The introductory paragraph states: '274301 Wikipedia (provisional designations: 2008 QH₂₄, 2007 FK₃₄, 1997 RO₄) is a main belt asteroid. It was discovered by the Andrushivka Astronomical Observatory in August 2008. The asteroid was named after the online encyclopedia Wikipedia in January 2013.' Below this is a section titled 'Discovery'. The first sentence reads: 'The asteroid was discovered by astronomers from the Andrushivka Astronomical Observatory (A50) in Ukraine.' The second sentence is: 'It was also observed on the next night and it received provisional designation 2008 QH24|'. There are two grey callout boxes with arrows pointing to the text: one pointing to '2008 QH24|' with the name 'Carl', and another pointing to 'received' with the name 'Jules-Tr'. On the right side of the page, there are icons for user profile, chat, and a clock.

Jane can view who is participating in the article...

X Editing 274301 Wikipedia **B** *I* U **:** **1**/**2**   






274301 Wikipedia


274301 Wikipedia (provisional designations: **2008 QH₂₄**, **2007 FK₃₄**, **1997 RO₄**) is a [main belt asteroid](#). It was discovered by the [Andrushivka Astronomical Observatory](#) in August 2008. The asteroid was named after the online encyclopedia [Wikipedia](#) in January 2013.

Discovery

The asteroid was discovered by astronomers from the Andrushivka Astronomical Observatory (A50) in Ukraine. It was also observed on the next night and it received provisional designation 2008 QH24.

Last edited 2 days ago by N.Agas **||**

 12 Editors 	
N.Agas Astronomy 21 edits 	
Wayne Milk Spaceflight Blades ... 15 edits 	
Hal Nine K Spaceflight 15 edits 	



+ Invite collaborators

Quick conversation

...and what are they working on.

274301 Wikipedia

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Discussion

A reference is missing

The NASA references don't work for me, and I cannot find a reference for...

👤 JohnS

🗨️ 8 👤 6

Redirects

"Wikipedia Asteroid" and "Asteroid Wikipedia" should redirect to this...

👤 CosminAunt

🗨️ 8 👤 6



+ New topic

Quick conversation

With the live history view, Jane can see changes as they happen, and navigate a timeline of changes.

Curiosity (rover)

Curiosity is a car-sized [robotic rover](#) exploring [Gale Crater](#) on [Mars](#) as part of [NASA's Mars Science Laboratory mission](#) (MSL).^[9]

Curiosity was launched from [Cape Canaveral](#) on November 26, 2011, at 10:02 EST aboard the MSL spacecraft and successfully landed on [Aeolis Palus](#) in Gale Crater on Mars on August 6, 2012, 05:17 UTC.^{[11][11]} The [Bradbury Landing site](#)^[8] was less than 2.4 km (1.5 mi) from the center of the rover's touchdown target after a 563,000,000 km (350,000,000 mi) journey.^[12]

On June 24, 2014, Curiosity completed a [Martian year](#)—687 Earth days—after finding that Mars once had [environmental conditions favorable for microbial life](#).^[16]

Goals and objectives

As established by the [Mars Exploration Program](#), the main scientific goals of the MSL mission are to [find martians](#) [help determine whether Mars could ever have supported life](#), as well as determining the [role of water](#), and to study the [climate](#) ^[13]^[14] and [geology of Mars](#).^{[13][14]} The mission will also help prepare for [human](#) ^[14] exploration.

Last edited 2 days ago by N.Agas

History

1m	Current new news	6 Astronomy	-5 +20
2h	Details on the name	Cronopio	+22
3h	Discovery info	Wayne Milk	-8 +20
4h	Correct style	4 Astronomy	-9 +3
6h	More details	4 Astronomy	-2 +5

Current new news

6 editors [view conversation](#)

N.Agas

Wayne Milk

Hal Nine K

[View this version](#)

[Revert](#)

Quick conversation

1

Jane can focus on a given paragraph to view authorship...

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Current new news

6 editors [view conversation](#)

N.Agas	
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View this version	Revert

Quick conversation

1

..or on given authors to view how much they contributed.

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Current new news

6 editors [view conversation](#)

N.Agas

Wayne Milk

Hal Nine K

[View this version](#)

[Revert](#)

Quick conversation

1

Let's discuss: Challenges

- One version - multiple authors
- Real-time vandalism
- Co-existence of real-time and non-real-time
 - Focused writing
 - Unsupported browsers
 - Social reasons
- Chat misuse

Let's discuss: Applications

- Current events
- Conflict resolution
- Mentoring
- Targeted collaborations
- Teahouse / new user walkthroughs
- Others?

Let's discuss: Questions

- How do we find other editors?
- Do we need “user groups”?
- How to record/display who wrote what in a collaborative session?
- When is a collaborative edit “done”?

Let's discuss: Social impact

- Will this encourage new editors? Readers?
- Will this encourage abuse?
- Do we become the next Facebook?
 - Should we?
- What happens when we make visible the community behind the wiki?
 - Should we?
 - Does that make us less “academic”?
 - Does that make us more biased?

Strawman

- Radically open. No ownership of session.

Also: anyone in session can kick anyone, but it's recorded/reported.

"Report abuse" button in session, saves entire transaction history and all participants for review.

Can use 'global undo' to revert vandalism w/in session

- No real time chat. use Out-Of-Band mechanism.

- All you need is the URL to join a session. (Shared Out-Of-Band)

- Public listing of all active sessions (recent changes)

- Revision save: that starts a NN timer and anyone can object/edit to abort, but otherwise person who hits save is credited for the edit (others appear in comment) and is responsible for reviewing diff and preventing bad things

Discuss!