

Avoiding Spoilers On MediaWiki Fan Sites Using Memento

By

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Warning: This presentation may contain spoilers

It Started With A Discussion At Work About This Guy From *Game Of Thrones*



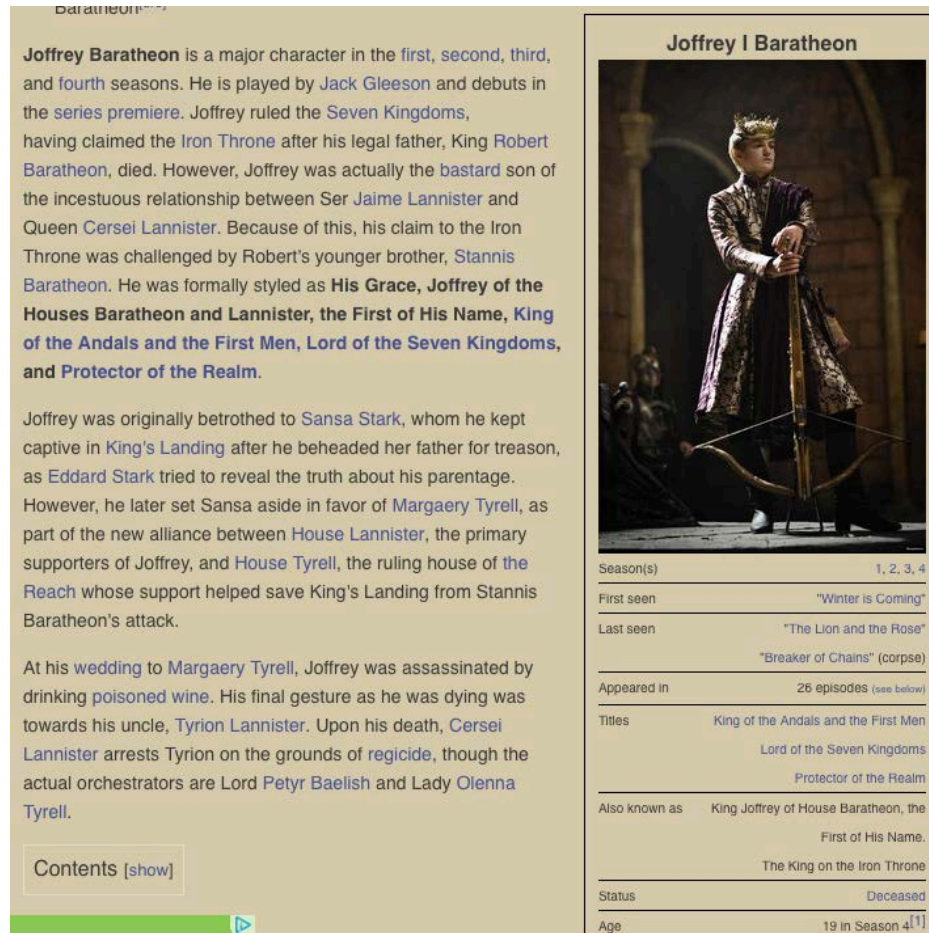
So We Use Fan Wikis, Because They Are Useful For Our Discussions

Joffrey Baratheon is a major character in the first, second, third, and fourth seasons. He is played by Jack Gleeson and debuts in the series premiere. Joffrey ruled the Seven Kingdoms, having claimed the Iron Throne after his legal father, King Robert Baratheon, died. However, Joffrey was actually the bastard son of the incestuous relationship between Ser Jaime Lannister and Queen Cersei Lannister. Because of this, his claim to the Iron Throne was challenged by Robert's younger brother, Stannis Baratheon. He was formally styled as **His Grace, Joffrey of the Houses Baratheon and Lannister, the First of His Name, King of the Andals and the First Men, Lord of the Seven Kingdoms, and Protector of the Realm**.

Joffrey was originally betrothed to Sansa Stark, whom he kept captive in King's Landing after he beheaded her father for treason, as Eddard Stark tried to reveal the truth about his parentage. However, he later set Sansa aside in favor of Margaery Tyrell, as part of the new alliance between House Lannister, the primary supporters of Joffrey, and House Tyrell, the ruling house of the Reach whose support helped save King's Landing from Stannis Baratheon's attack.

At his wedding to Margaery Tyrell, Joffrey was assassinated by drinking poisoned wine. His final gesture as he was dying was towards his uncle, Tyrion Lannister. Upon his death, Cersei Lannister arrests Tyrion on the grounds of regicide, though the actual orchestrators are Lord Petyr Baelish and Lady Olenna Tyrell.

[Contents](#) [\[show\]](#)



Season(s)	1, 2, 3, 4
First seen	"Winter is Coming"
Last seen	"The Lion and the Rose" "Breaker of Chains" (corpse)
Appeared in	26 episodes (see below)
Titles	King of the Andals and the First Men Lord of the Seven Kingdoms Protector of the Realm
Also known as	King Joffrey of House Baratheon, the First of His Name, The King on the Iron Throne
Status	Deceased
Age	19 in Season 4 ^[1]

http://gameofthrones.wikia.com/wiki/Joffrey_Baratheon

But The Current Page For This Character Contains Spoilers

Joffrey Baratheon is a major character in the first, second, third, and fourth seasons. He is played by Jack Gleeson and debuts in the series premiere. Joffrey ruled the Seven Kingdoms, having claimed the Iron Throne after his legal father, King Robert Baratheon. He is the eldest son of the incestuous King Robert and Queen Cersei. He is the Iron Throne was claimed by Stannis Baratheon.


He was the **King of the Houses Baratheon and Lannister, the First of His Name, King of the Andals and the First Men, Lord of the Seven Kingdoms, and Protector of the Realm.**

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[Contents](#) [\[show\]](#)

Joffrey I Baratheon



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Joffrey Baratheon is a major character in the first, second, third, and fourth seasons. He is played by Jack Gleeson and debuts in the series premiere. Joffrey ruled the Seven Kingdoms, having claimed the Iron Throne after his legal father, King Robert Baratheon. He was the eldest son of the incestuous King Robert Baratheon and Queen Cersei Lannister. He was the Iron Throne was claimed by Stannis Baratheon, the younger brother of the late King Robert Baratheon, and the younger brother of the late King Robert Baratheon and Lannister, the First of His Name, King of the Andals and the First Men, Lord of the Seven Kingdoms, and Protector of the Realm.

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Joffrey I Baratheon

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At his wedding to Margaery Tyrell, Joffrey was poisoned as he was dying was

poisoned wine.


Upon his death,

Deceased

Contents [show]

Status

Age



We All Enjoy Some Episodic Fiction So Much...



...That Fans Have Created Wikis...



...And The Rest Of Us Read Them



So, What If We Could Avoid The Spoilers By Using Past Wiki Pages?

"We've had vicious kings, and we've had idiot kings...but I don't know if we've ever been cursed with a vicious idiot for a king!"

—Tyrion Lannister, summarizing King Joffrey.^[src]

Joffrey Baratheon is a major character in the first, second and third seasons. He is played by Jack Gleeson and debuts in the series premiere. Joffrey is the current ruler of the Seven Kingdoms, having claimed the **Iron Throne** after his father, King Robert Baratheon, died. However Joffrey is actually the bastard son of the incestuous relationship between Ser **Jaime Lannister** and Queen **Cersei Lannister**. Because of this, his claim to the Iron Throne is challenged by Robert's younger brother, **Stannis Baratheon**. He is formally styled as **His Grace, Joffrey of the Houses Baratheon and Lannister, the First of His Name, King of the Andals and the First Men, Lord of the Seven Kingdoms, and Protector of the Realm**.

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Joffrey I Baratheon



Season(s)	1, 2, 3, 4
First seen	"Winter is Coming"
Last seen	"Two Swords"
Appeared in	25 episodes (see below)
Titles	King of the Andals and the First Men Lord of the Seven Kingdoms Protector of the Realm
Also known as	King Joffrey of Houses Baratheon and

Status

Alive

Age	19 in Season 4 ^[?]
Origin	King's Landing

http://gameofthrones.wikia.com/wiki/Joffrey_Baratheon?oldid=125053

Order Of Discussion

- Background
- Related Work
- TimeGate Heuristics
- Theory Of Spoiler Probability
- Measurements Of Spoiler Probability
- Spoilers In The Wayback Machine
- The Memento MediaWiki Extension
- Future Work
- Conclusions

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Building To The Naïve Spoiler Concept

BACKGROUND

Most Of Us Are Familiar With The Web Browser And HTML

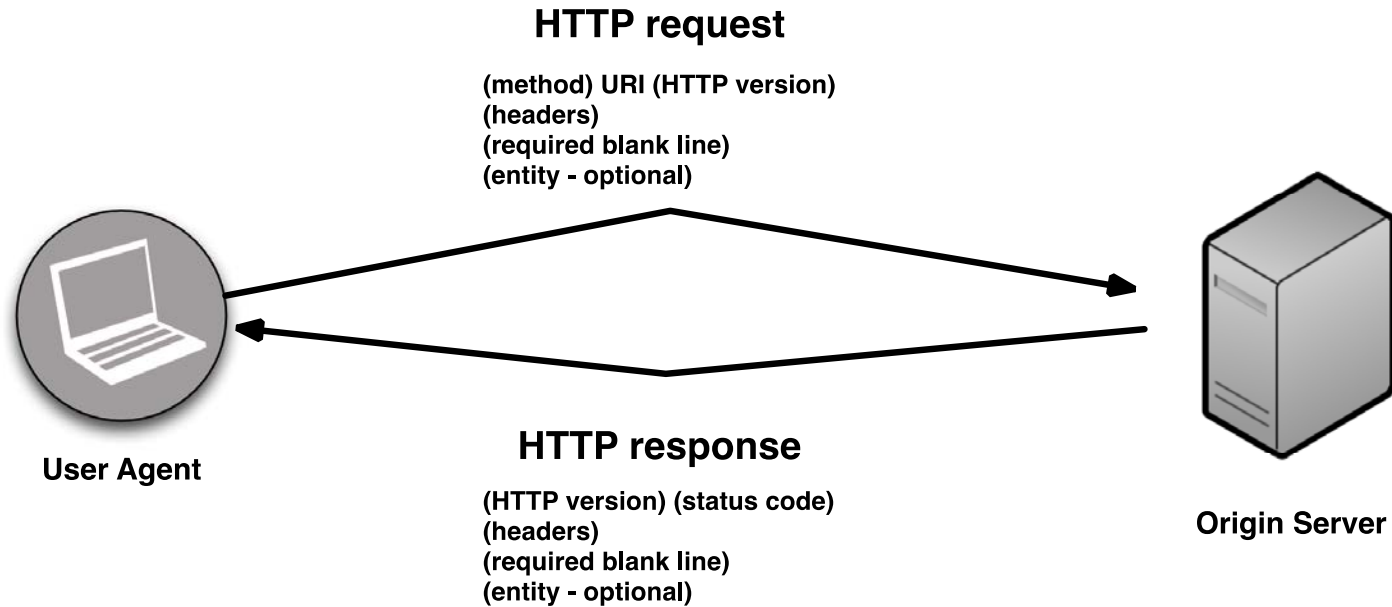


The Web Browser is how we view web pages

HTML is what the browser parses to render the page

```
<!DOCTYPE html>
<html lang="mul" dir="ltr">
<head>
<!-- Sysops: Please do not edit the main template directly; update /temp and synchronise. -->
<meta charset="utf-8">
<title>Wikipedia</title>
<!--[if lt IE 7]><meta http-equiv="imagetoolbar" content="no"><![endif]-->
<meta name="viewport" content="initial-scale=1.0, user-scalable=yes">
<link rel="apple-touch-icon" href="//bits.wikimedia.org/apple-touch/wikipedia.png">
<link rel="shortcut icon" href="//bits.wikimedia.org/favicon/wikipedia.ico">
<link rel="license" href="//creativecommons.org/licenses/by-sa/3.0/">
<link rel="stylesheet" href="//bits.wikimedia.org/meta.wikimedia.org/load.php?
debug=false&lang=en&modules=ext.gadget.wm-portal&only=styles&skin=vector&*>
<style type="text/css">
```

Hypertext Transfer Protocol (HTTP) Is What Delivers Pages To The Browser



Here Is An Example HTTP Request From Google Chrome

```
1 GET /wiki/The_Hunger_Games HTTP/1.1
2 Host: en.wikipedia.org
3 Accept: image/webp, */*;q=0.8
4 Accept-Encoding: gzip, deflate, sdch
5 Accept-Language: en-US, en;q=0.8
6 Referer: https://plus.google.com/
7 User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_9_4) AppleWebKit/537.36 (KHTML,
   like Gecko) Chrome/36.0.1985.143 Safari/537.36
```


And The Interesting Parts Of Our Request...

```
1 GET /wiki/The_Hunger_Games HTTP/1.1
2 Host: en.wikipedia.org
3 Accept: image/webp, */*;q=0.8
4 Accept-Encoding: gzip, deflate, sdch
5 Accept-Language: en-US, en;q=0.8
6 Referer: https://plus.google.com/
7 User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_9_4) AppleWebKit/537.36 (KHTML,
   like Gecko) Chrome/36.0.1985.143 Safari/537.36
```

Get me /wiki/The_Hunger_Games from en.wikipedia.org

Here Is An Example HTTP Response From Wikipedia's Server For That Page

```
1 HTTP/1.1 200 OK
2 Accept-Ranges: bytes
3 Age: 352057
4 Cache-Control: private, s-maxage=0, max-age=0, must-revalidate
5 Connection: keep-alive
6 Content-Encoding: gzip
7 Content-language: en
8 Content-Length: 13769
9 Content-Type: text/html; charset=UTF-8
10 Date: Fri, 15 Aug 2014 13:43:03 GMT
11 Last-Modified: Mon, 11 Aug 2014 11:55:18 GMT
12 Server: Apache
13 Set-Cookie: GeoIP=US:Norfolk:36.9312:-76.2397:v4; Path=/; Domain=.wikipedia.org
14 Vary: Accept-Encoding, Cookie
15 Via: 1.1 varnish, 1.1 varnish
16 X-Cache: cp1052 hit (4), cp1065 frontend hit (906)
17 X-Content-Type-Options: nosniff
18 X-UA-Compatible: IE=Edge
19 X-Varnish: 350285837 350035840, 1753471343 1233627904
20
21 ... entity begins here
```

And The Interesting Parts Of Our Response...

```
11 HTTP/1.1 200 OK
12 Accept-Ranges: bytes
13 Age: 352057
14 Cache-Control: private, s-maxage=0, max-age=0, must-revalidate
15 Connection: keep-alive
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26 X-Cache: cp1052 hit (4), cp1065 frontend hit (906)
27 X-Content-Type-Options: nosniff
28 X-UA-Compatible: IE=Edge
29 X-Varnish: 350285837 350035840, 1753471343 1233627904
30 ... entity begins here
```

OK, I Have What You Are Looking For

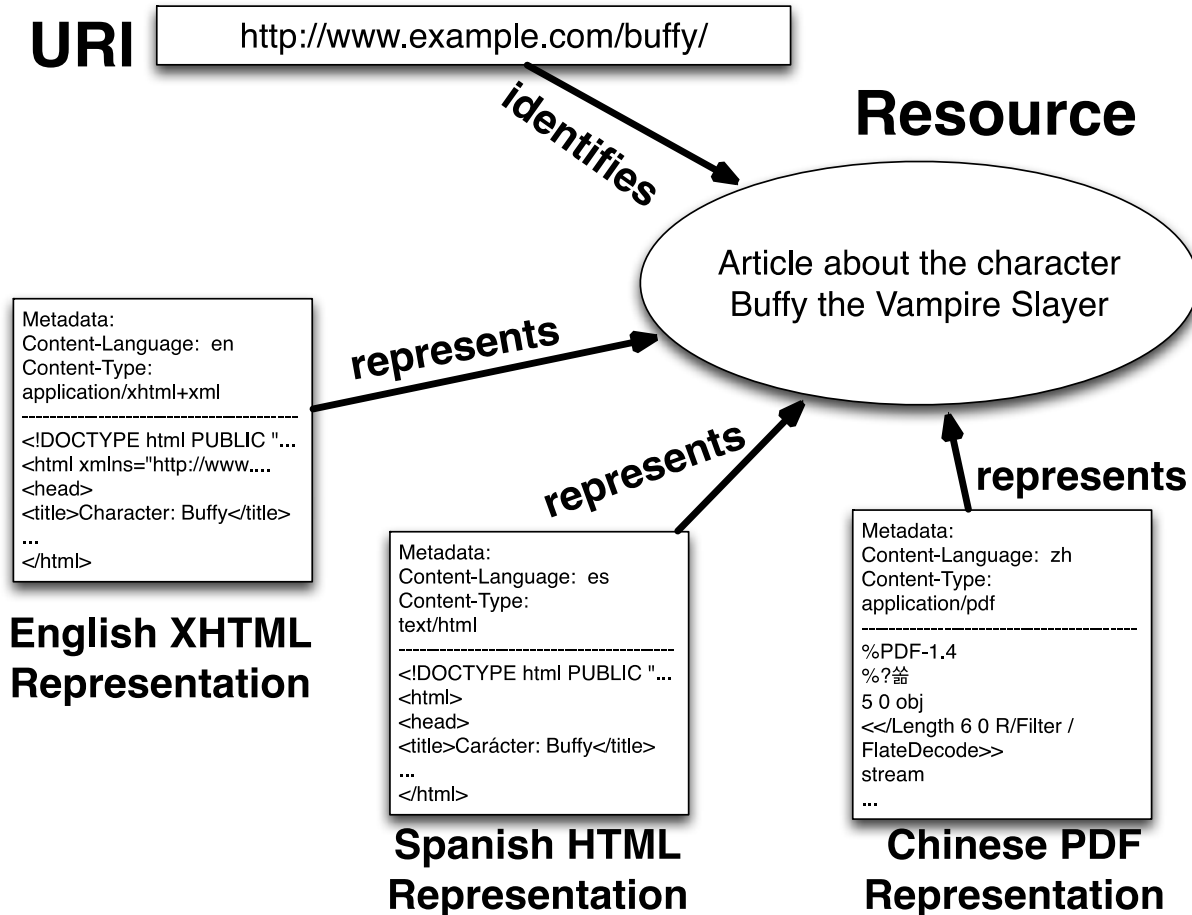
This Is How Big It Is

This Is When It Was Last Changed

Newline Indicating Start Of HTML

HTML Starts Here And You Know How Big It Is, So Stop Reading When You Get 13769 Bytes

Introducing Web Architecture: Resources Can Have Many Representations



In 1996 Tim Berners-Lee Discussed Different Dimensions Of Representation

Time	A resource may vary with time. For example, "The Wall Street Journal" varies with time. Each issue is a time-specific resource, which does not change with time. Most home pages on the Web change with time, in a less periodic way.
Language	When a document is translated, it is useful to be able to refer to it either in the generic, or to a particular specific translation.
Content-Type	A given resource may have many ways in which it can be represented on the wire, using different <code>Content-types</code> (in HTTP terms). As an example, an image may be represented in PNG or JFIF format.
Target medium	A given resource may be targeted specifically to a specific medium, such as a printer, being displayed on laptop screen, being displayed on a cellphone, or being projected onto a large screen for an audience. (This is currently available for selecting CSS stylesheets, but is not done at the HTTP content negotiation level)

<http://www.w3.org/DesignIssues/Generic.html>

These Representations Are Requested And Identified By HTTP Headers

Request Header	Response Header	Dimension
Accept	Content-Type	Content type of Representation
Accept-Language	Content-Language	Language of Representation
Accept-Encoding	Content-Encoding	Medium of Representation
Accept-Charset	Content-Type	Character Set of Representation

These Headers Were Specified In RFC 2616

Their Updated Specification Is In RFC 7231

These Representations Are Requested And Identified By HTTP Headers

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Accept	Content-Type	Content type of Representation
Accept-Language	Content-Language	Language of Representation
Accept-Encoding	Content-Encoding	Medium of Representation
Accept-Charset	Content-Type	Character Set of Representation

The term for this is **Content Negotiation**

It works so well that many are unaware of its ubiquity

Content Negotiation Does Not Create Representations,
It Only Directs The User To Ones That Already Exist...

Using Our Headers Example, Chrome Tells The Server What You Want

```
1 GET /wiki/The_Hunger_Games HTTP/1.1
2 Host: en.wikipedia.org
3 Accept: image/webp, */*;q=0.8
4 Accept-Encoding: gzip, deflate, sdch
5 Accept-Language: en-US, en;q=0.8
6 Referer: https://plus.google.com/
7 User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_9_4) AppleWebKit/537.36 (KHTML,
   like Gecko) Chrome/36.0.1985.143 Safari/537.36
```

I prefer image/webp, and
I want it compressed with gzip, and
I want it in US English

Using Our Headers Example, Wikipedia Tells Chrome What It Returns

```
1 HTTP/1.1 200 OK
2 Accept-Ranges: bytes
3 Age: 352057
4 Cache-Control: private, s-maxage=0, max-age=0, must-revalidate
5 Connection: keep-alive
6 Content-Encoding: gzip
7 Content-language: en
8 Content-Length: 13769
9 Content-Type: text/html; charset=UTF-8
10 Date: Fri, 15 Aug 2014 13:43:03 GMT
11 Last-Modified: Mon, 11 Aug 2014 11:55:18 GMT
12 Server: Apache
13 Set-Cookie: GeoIP=US:Norfolk:36.9312:-76.2397:v4; Path=/; Domain=.wikipedia.org
14 Vary: Accept-Encoding, Cookie
15 Via: 1.1 varnish, 1.1 varnish
16 X-Cache: cp1052 hit (4), cp1065 frontend hit (906)
17 X-Content-Type-Options: nosniff
18 X-UA-Compatible: IE=Edge
19 X-Varnish: 350285837 350035840, 1753471343 1233627904
20
21 ... entity begins here
```

My response is compressed with gzip, and
My response is in US English

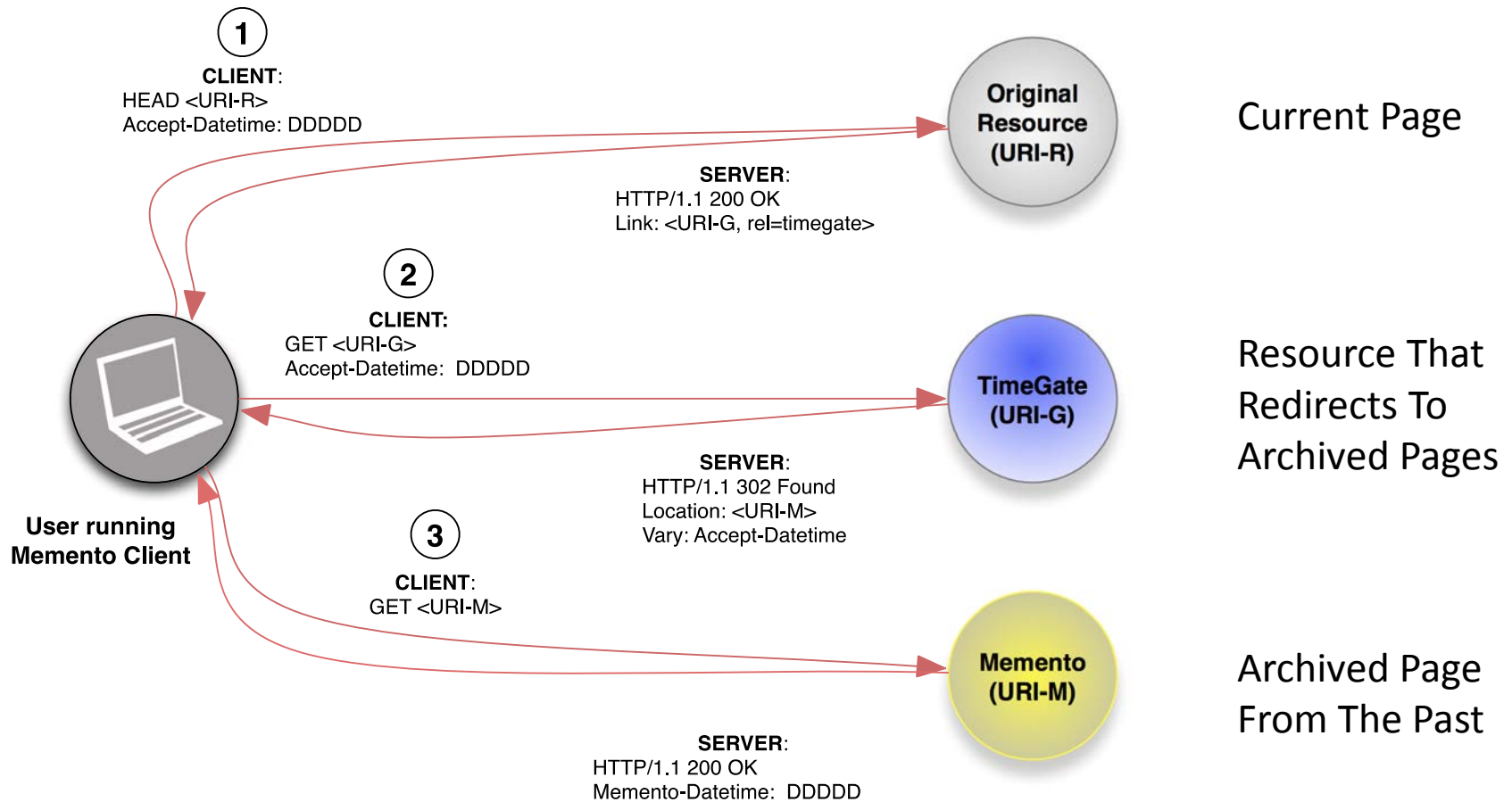
This response is in text/html with
a character set of UTF-8

Memento Finally Completes The Set By Including Time

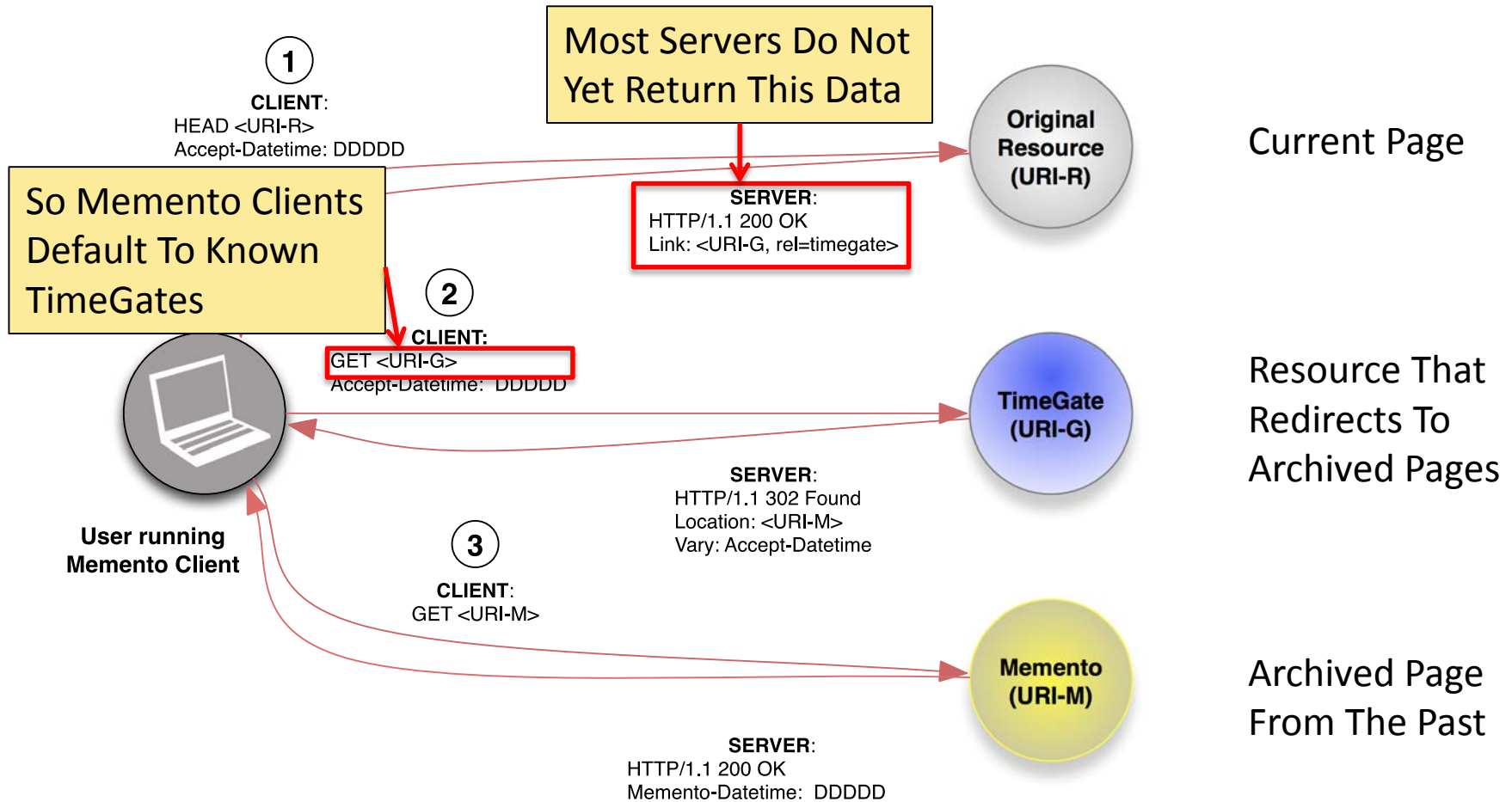
Request Header	Response Header	Dimension
Accept	Content-Type	Content type of Representation
Accept-Language	Content-Language	Language of Representation
Accept-Encoding	Content-Encoding	Medium of Representation
Accept-Charset	Content-Type	Character Set of Representation
Accept-Datetime	Memento-Datetime	Time of the Representation

RFC 7089 Defines Memento, Allowing Us To Negotiate In Time

Memento Works In Several Steps



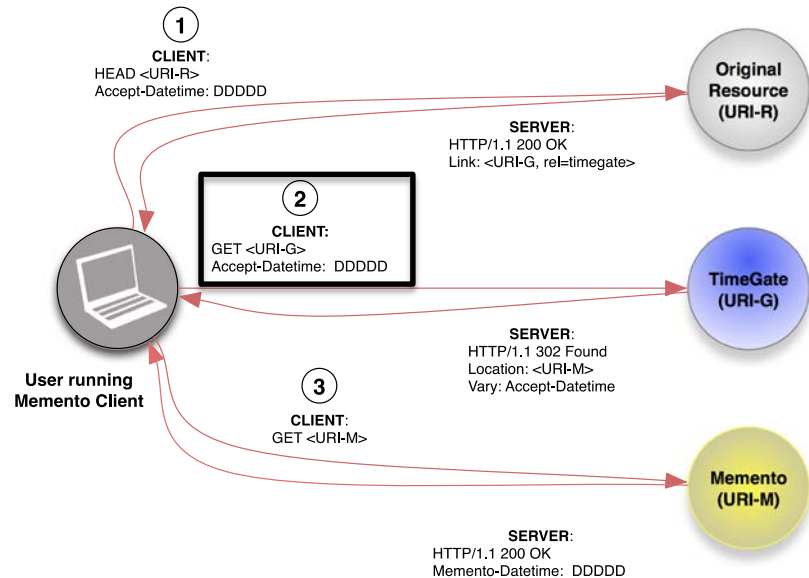
At First The Client Hopes To Get A TimeGate URI From the Server, But...



Then, A Browser Asks A TimeGate For A Specific Page From A Specific Datetime

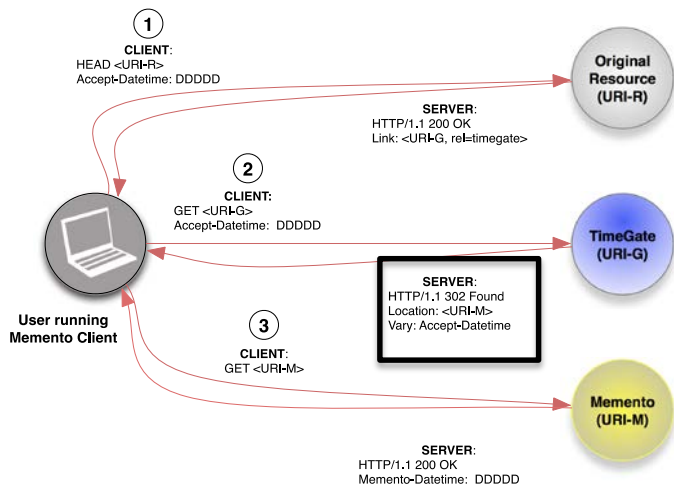
```
GET /web/http://www.cnn.com/ HTTP/1.1
Host: web.archive.org
Accept: image/webp, */*;q=0.8
Accept-Datetime: Wed, 19 Mar 2003 01:25:35 GMT
Accept-Encoding: gzip, deflate, sdch
Accept-Language: en-US, en; q=0.8
Referer: http://www.cnn.com/
User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_9_4) AppleWebKit/537.36 (KHTML,
like Gecko) Chrome/36.0.1985.143 Safari/537.36
```

I Want This Page On This Date



And The TimeGate Tells The Browser Where It Can Go

Do Not Stop Here, I Am Redirecting You Elsewhere

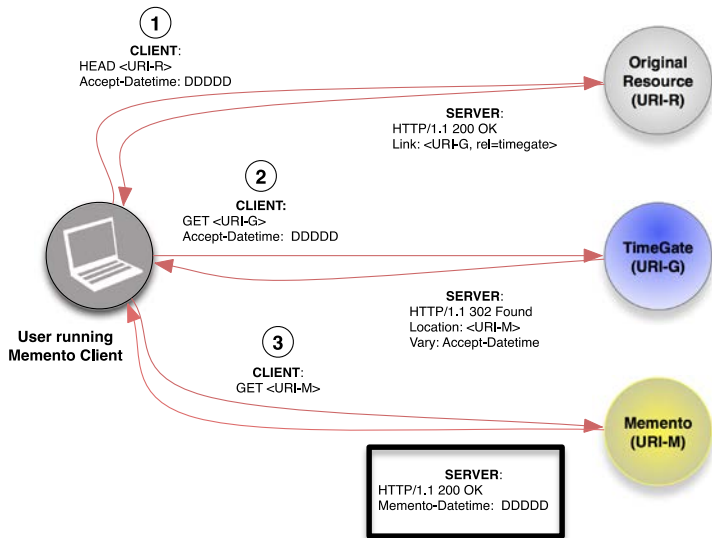


```

HTTP/1.1 302 Moved Temporarily
Connection: keep-alive
Content-Type: text/html
Date: Fri, 22 Aug 2014 17:27:57 GMT
Link: <http://www.cnn.com></http:>; rel="original", <http://web.archive.org/web/timemap/link/http://www.cnn.com></http:>; rel="timemap"; type="application/link-format", <http://web.archive.org/web/20000620180259/http://www.cnn.com></http:>; rel="first memento"; datetime="Tue, 20 Jun 2000 18:02:59 GMT", <http://web.archive.org/web/20030215012445/http://www.cnn.com></http:>; rel="prev memento"; datetime="Sat, 15 Feb 2003 01:24:45 GMT", <http://web.archive.org/web/20030320060210/http://www.cnn.com></http:>; rel="memento"; datetime="Thu, 20 Mar 2003 06:02:10 GMT", <http://web.archive.org/web/20030321181645/http://www.cnn.com></http:>; rel="next memento"; datetime="Fri, 21 Mar 2003 18:16:45 GMT", <http://web.archive.org/web/20140822104304/http://www.cnn.com></http:>; rel="last memento"; datetime="Fri, 22 Aug 2014 10:43:04 GMT"
Location: http://web.archive.org/web/20030320060210/http://www4.cnn.com/
Server: Tengine/2.0.3
Set-Cookie: wb_total_perf=7554; Expires=Fri, 22-Aug-2014 17:28:57 GMT; Path=/web/http://www.cnn.com/
Transfer-Encoding: chunked
Vary: accept-date-time
X-Archive-Playback: 0
X-Archive-Wayback-Perf: [Ind
    RobotsRedis: 1, RobotsTotal: 1, total: 7554]
X-Link-JSON: {"closest":{"wb_url":"http://web.archive.org/web/20030320060210/http://www.cnn.com/", "timestamp":"20030320060210", "status":"200"}}
X-Page-Cache: MISS
    
```

Go To This URI To Get The Best Memento For The Date You Requested

Then The Browser Gets A Memento Like Any Other Web Page



```

HTTP/1.1 200 OK
Server: Tengine/2.0.3
Date: Fri, 22 Aug 2014 17:23:10 GMT
Content-Type: text/html
Content-Length: 80824
Connection: keep-alive
set-cookie: wayback_server=6; Domain=archive.org; Path=/; Expires=Sun, 21-Sep-14 17:23:10 GMT;

Memento-DateTime: Fri, 01 Jun 2001 04:51:29 GMT
Link: <http://www.cnn.com/>; rel="original", <http://web.archive.org/web/timemap/link/http://www.cnn.com/>; rel="timemap"; type="application/link-format", <http://web.archive.org/web/http://www.cnn.com/>; rel="timegate", <http://web.archive.org/web/20000620180259/http://www.cnn.com/>; rel="first memento"; datetime="Tue, 20 Jun 2000 18:02:59 GMT", <http://web.archive.org/web/20010601045124/http://www.cnn.com/>; rel="prev memento"; datetime="Fri, 01 Jun 2001 04:51:24 GMT", <http://web.archive.org/web/20010601045129/http://www.cnn.com/>; rel="memento"; datetime="Fri, 01 Jun 2001 04:51:29 GMT", <http://web.archive.org/web/20010601050038/http://www.cnn.com/>; rel="next memento"; datetime="Fri, 01 Jun 2001 05:00:38 GMT", <http://web.archive.org/web/20140822104304/http://www.cnn.com/>; rel="last memento"; datetime="Fri, 22 Aug 2014 10:43:04 GMT"

X-Archive-Guessed-Charset: UTF-8
X-Archive-Orig-server: Netscape-Enterprise/4.1
X-Archive-Orig-expires: Fri, 01 Jun 2001 04:52:29 GMT
X-Archive-Orig-set-cookie: CNNid=cf3020140822104304; Expires=Fri, 22-Aug-2014 17:24:11 GMT; path=/; domain=www.cnn.com;
X-Archive-Orig-date: Fri, 01 Jun 2001 04:51:29 GMT
X-Archive-Orig-content-type: text/html
X-Archive-Orig-last-modified: Fri, 01 Jun 2001 04:51:29 GMT
X-Archive-Orig-connection: close
X-Archive-Wayback-Perf: [IndexLoad: 677, IndexQueryTotal: 677, RobotsFetchTotal: 3, RobotsRedis: 3, RobotsTotal: 3, Total: 974, WARCResource: 139]
Set-Cookie: wb_total_perf=974; Expires=Fri, 22-Aug-2014 17:24:11 GMT; Path=/web/20010601045129/http://www.cnn.com/
X-Archive-Playback: 1
X-Page-Cache: MISS
    
```

This Is The Datetime Of This Memento

Here's Everything I Know About Archives For That Page

Memento Also Provides TimeMaps As A Machine-Readable List Of Mementos

```
<http://lostpedia.wikia.com/wiki/The_Numbers>; rel="original",  
<http://web.archive.org/web/timemap/link/http://lostpedia.wikia.com/wiki/The_Numbers>;  
  rel="self"; type="application/link-format"; from="Wed, 31 Dec 2008 03:44:05 GMT";  
  until="Tue, 01 Jul 2014 04:48:08 GMT",  
<http://web.archive.org/web/http://lostpedia.wikia.com/wiki/The_Numbers>; rel="timegate",  
<http://web.archive.org/web/20081231034405/http://lostpedia.wikia.com/wiki/The_Numbers  
  >; rel="first memento"; datetime="Wed, 31 Dec 2008 03:44:05 GMT",  
<http://web.archive.org/web/20090119183329/http://lostpedia.wikia.com/wiki/The_Numbers  
  >; rel="memento"; datetime="Mon, 19 Jan 2009 18:33:29 GMT",  
<http://web.archive.org/web/20090203143759/http://lostpedia.wikia.com/wiki/The_Numbers  
  >; rel="memento"; datetime="Tue, 03 Feb 2009 14:37:59 GMT",  
<http://web.archive.org/web/20090204193446/http://lostpedia.wikia.com/wiki/The_numbers  
  >; rel="memento"; datetime="Wed, 04 Feb 2009 19:34:46 GMT",  
....deletia
```

Memento For Chrome

Lets Users “Right-Click Into The Past”

The screenshot shows the Wikipedia article for "The Hunger Games". A right-click context menu is open over the article text, with the "Memento Time Travel" option highlighted. The menu also includes options like "Back", "Forward", "Reload", "Save As...", "Print...", "Translate to English", "View Page Source", "View Page Info", "Inspect Element", and "1Password". The article text is partially obscured by the menu. The Wikipedia logo and navigation sidebar are visible on the left. The right sidebar contains a table of contents for the article, including sections for "The Hunger Games", "Print publications", "Films and television", and "Audio".

<http://ws-dl.blogspot.com/2013/10/2013-10-14-right-click-to-past-memento.html>

Mink Lets Users See All Mementos For A Page

The screenshot shows the Wikipedia article for "The Hunger Games". The article text is partially obscured by a Memento browser overlay at the bottom. The overlay displays "List Mementos By:" with "Dropdown" selected and "Drill Down" as an option. It also shows "101 mementos available in 1 timemap" and a "Select a Memento to view" dropdown menu. The article content includes a notice that the article is missing information about the franchise's creation and history, a paragraph about the multimedia franchise, a section on the novels, a section on the movies, a section on the dystopia setting, a "Media" section, and a "Plot" section. A right-hand sidebar lists related items like "The Hunger Games" creator, original work, print publications, novels, films and television, audio, and soundtracks.

<http://ws-dl.blogspot.com/2014/10/2014-10-03-integrating-live-and.html>

Who Maintains Mementos?



Library of Congress Web Archives *Minerva*



HARVARD
LIBRARY

{ BnF

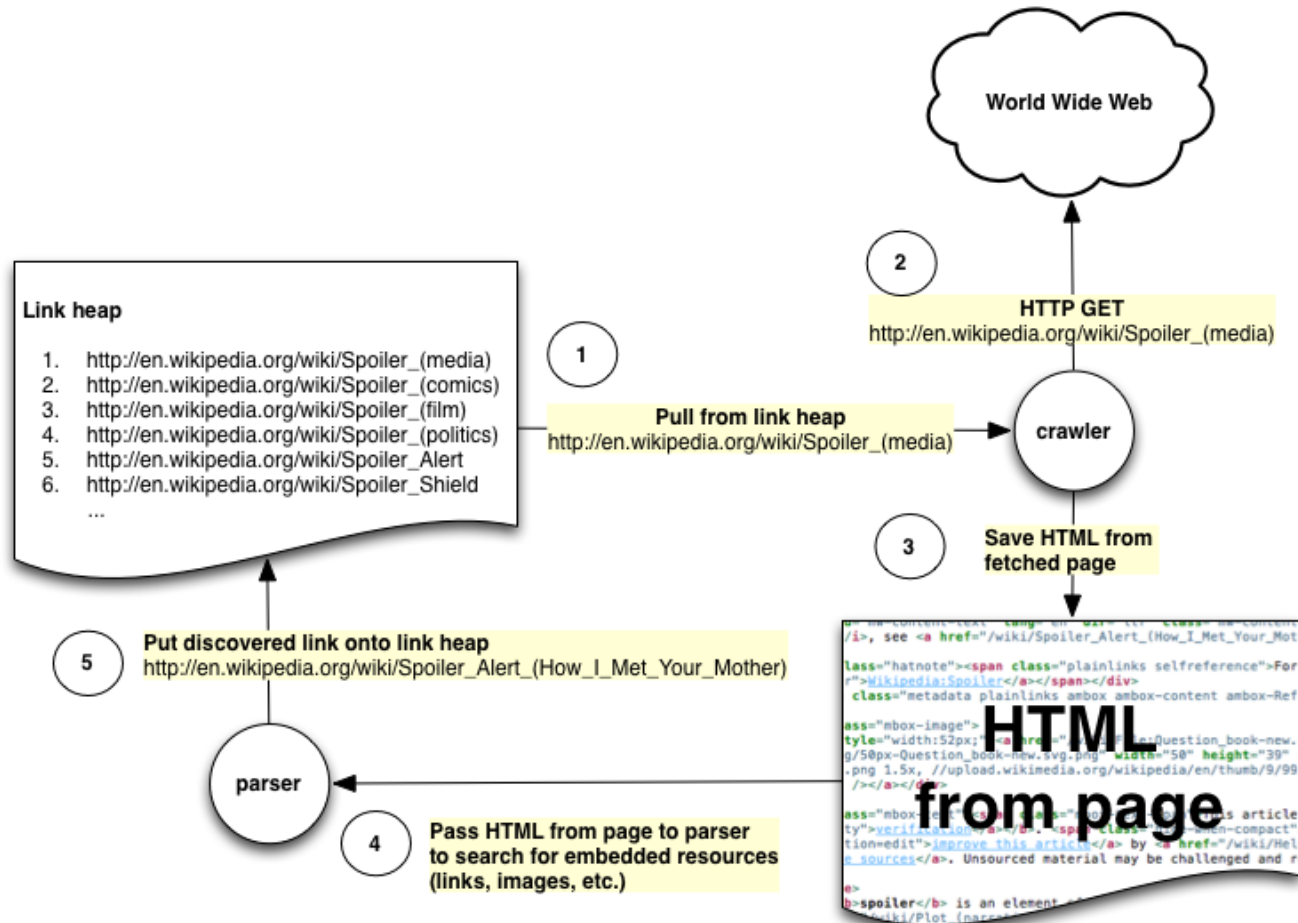
Bibliothèque
nationale de France



Vefsafn.is

Landsbókasafn Íslands - Háskólabókasafn
Þekkingarveita í allra þágu

How Are Mementos Acquired?



The Internet Archive Provides The Wayback Machine

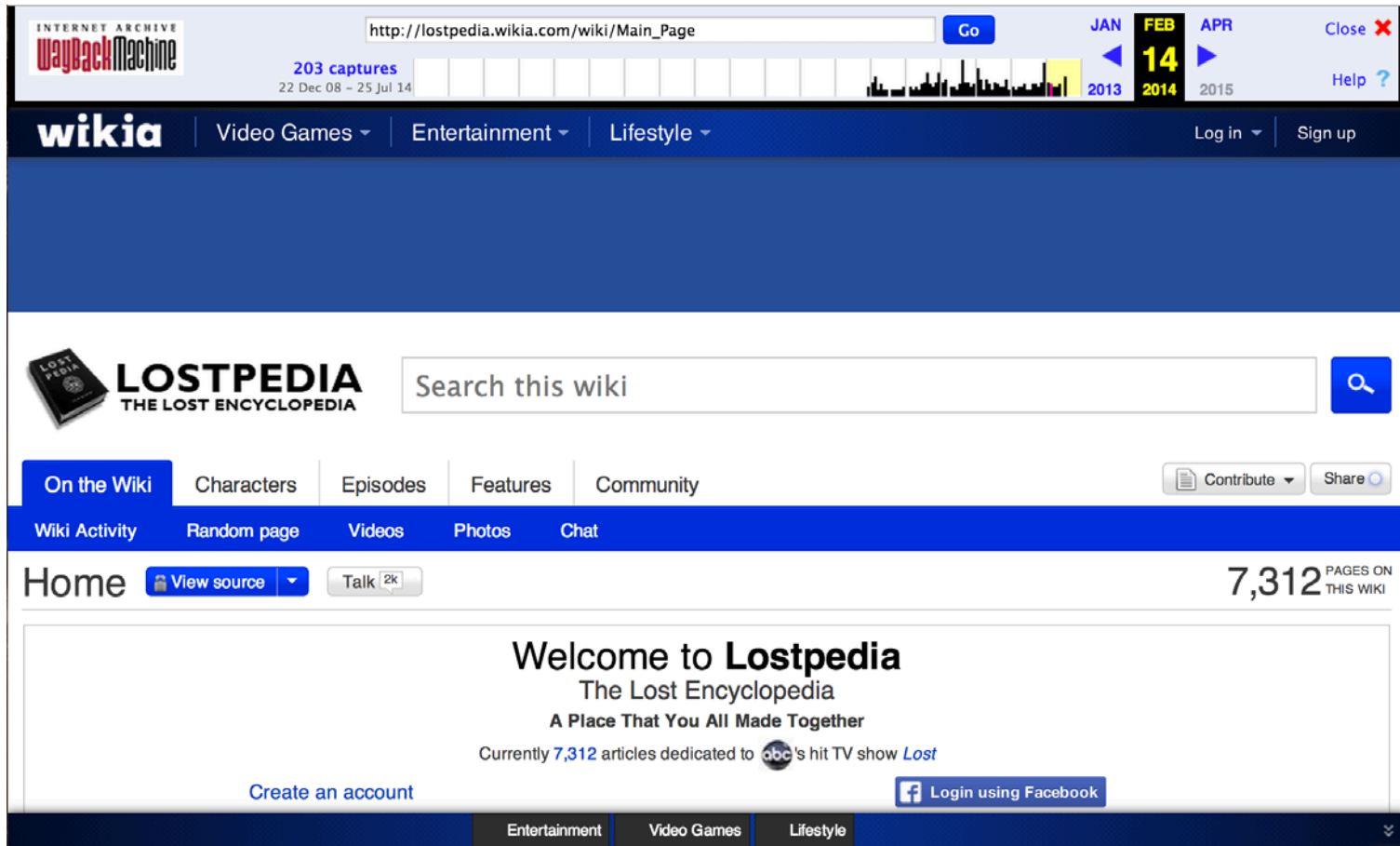
The screenshot shows the Internet Archive Wayback Machine homepage. At the top left is the Internet Archive logo, a classical building with columns. To its right is the tagline "Universal access to all knowledge". Below the logo is a navigation menu with links for "Web", "Video", "Texts", "Audio", "Software", "About", "Account", "TVNews", and "OpenLibrary". A secondary menu includes "Home", "Donate", "Store", "Blog", "FAQ", "Jobs", and "Volunteer Positions". A search bar is present with a "Search:" label, a text input field, a dropdown menu for "All Media Types", a magnifying glass icon, and a link to "Advanced Search". To the right of the search bar, it says "Anonymous User (login or join us)" and a blue "Upload" button.

The main content area features the "Wayback Machine" logo in red and black. Below it is a search input field containing "http://". To the right of the input field is a "BROWSE HISTORY" button. Below the search area, a large text block reads "423 Billion web pages saved over time." followed by a blue "DONATE" link. Below this text is a row of seven small thumbnail images showing various web pages from different eras.

At the bottom of the page, there are three icons with labels: a gear icon for "Tools", a blue square with a white 'A' for "Archive-IT" and "Subscription Service", and a blue square with a white 'D' for "Save Page Now".

<http://archive.org/web/>

...And See The Memento From The Internet Archive



http://web.archive.org/web/20140214065217/http://lostpedia.wikia.com/wiki/Main_Page

The Internet Archive Contains Mementos For Wiki Pages

INTERNET ARCHIVE
Wayback Machine

838 captures
7 Dec 03 - 21 Aug 14

DEC FEB APR
2003 2004 2005

Close X
Help ?

http://en.wikipedia.org/wiki/Abraham_Lincoln

Not logged in
Log in | Help

Go Search

Other languages: [Dansk](#) | [Deutsch](#) | [Esperanto](#) | [Español](#) | [Français](#) | [日本語 \(Nihongo\)](#) | [Nederlands](#) | [Polski](#) | [Svenska](#)

Abraham Lincoln

From Wikipedia, the free encyclopedia.

Abraham Lincoln (February 12, 1809 - April 15, 1865) was the 16th (1861-1865) President of the United States, and the first President from the Republican Party. He is well praised for successfully restoring the federal unity of the nation by defeating the secessionist Confederate States of America and along the way, playing in an important role in ending chattel slavery in the United States. However, a number of states' rights supporters view Lincoln as a tyrant who suspended civil liberties and suppressed the legitimate right to secede for which Lincoln himself had argued in 1848.

Table of contents [hide]

- 1 Early life
- 2 Early political career
- 3 Presidency
 - 3.1 Emancipation Proclamation
 - 3.2 Gettysburg Address
 - 3.3 The Civil War
 - 3.4 Assassination
- 4 Lincoln family
- 5 Lincoln memorialized
- 6 Supreme Court appointments
- 7 Related articles
- 8 Further reading
- 9 External links


Early life

Born on February 12, 1809, in Kentucky, Lincoln moved at a young age to Indiana then later to New Salem, Illinois. He served as a captain in the U.S. Army during the Black Hawk War. He later tried his hand at several business and political ventures. He was highly regarded as a practicing lawyer. Lincoln served four terms in the Illinois State Legislature, was briefly elected to Congress (1846) and had a successful law practice in Illinois both before and after his single term in the House of Representatives. It is commonly held that Lincoln had turbulent mood swings alternating between grandiosity and depression, which greatly moderated after his marriage to Mary Ann Todd in 1842.

Early political career

First elected to the House of Representatives, Lincoln spent most of his time in Washington, DC alone and made a less than spectacular impression on his fellow politicians. During his unsuccessful campaign for the United States Senate against Stephen A. Douglas, it was Lincoln's well-known gift of oratory that brought public support to an otherwise unimpressive candidate. Lincoln debated Douglas in a series of events which represented a national discussion on the issues that were about to split the nation in two. The Lincoln-Douglas debates presaged the Presidential election of 1860, in which Douglas and Lincoln were once again opponents. On November 6, 1860, Lincoln was elected as the 16th President of the United States, the first Republican to hold that office.

Abraham Lincoln

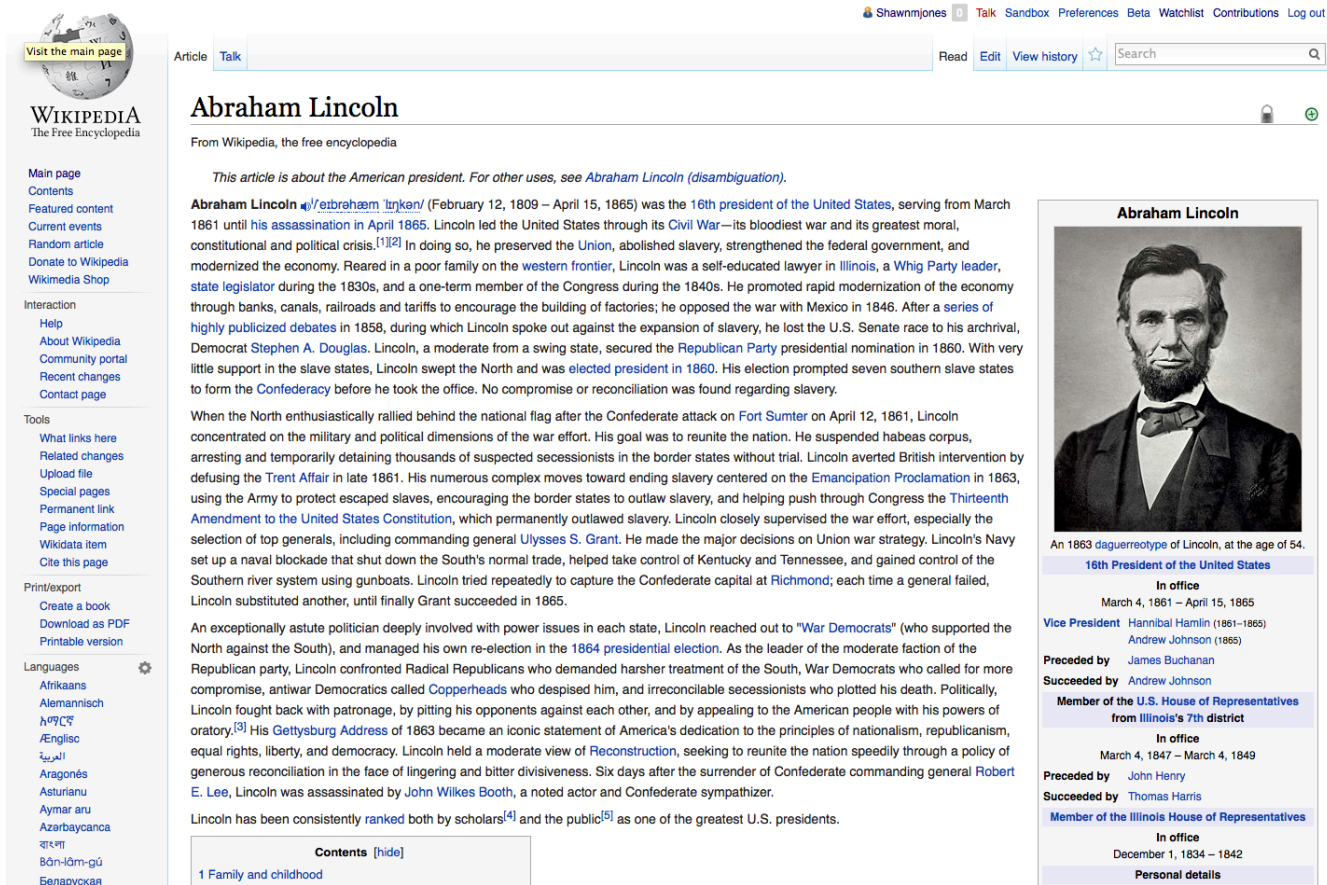


[Larger image](#)

Order:	16th President
Term of Office:	March 4, 1861 - April 15, 1865
Followed:	James Buchanan
Succeeded by:	Andrew Johnson
Date of Birth:	Sunday, February 12, 1809
Place of Birth:	Larue County, Kentucky
Date of Death:	Saturday, April 15, 1865
Place of Death:	Washington, D.C.
First Lady:	Mary Ann Todd (1818-1882)
Occupation:	lawyer
Political Party:	Republican
Vice President:	<ul style="list-style-type: none">Hannibal Hamlin (1861-1865)Andrew Johnson (1865)

http://web.archive.org/web/20040204011112/http://en.wikipedia.org/wiki/Abraham_Lincoln

Here Is An Example Wiki Article...



The image shows a screenshot of the Wikipedia article for Abraham Lincoln. The page layout includes a top navigation bar with user options (Shawnmjones, Talk, Sandbox, Preferences, Beta, Watchlist, Contributions, Log out) and a search bar. The article title "Abraham Lincoln" is prominently displayed, followed by the text "From Wikipedia, the free encyclopedia". A disclaimer states: "This article is about the American president. For other uses, see Abraham Lincoln (disambiguation)." The main text begins with "Abraham Lincoln (/ˌæbrəˈhæm ˈlɪŋkən/ (February 12, 1809 – April 15, 1865) was the 16th president of the United States, serving from March 1861 until his assassination in April 1865. Lincoln led the United States through its Civil War—its bloodiest war and its greatest moral, constitutional and political crisis. In doing so, he preserved the Union, abolished slavery, strengthened the federal government, and modernized the economy. Reared in a poor family on the western frontier, Lincoln was a self-educated lawyer in Illinois, a Whig Party leader, state legislator during the 1830s, and a one-term member of the Congress during the 1840s. He promoted rapid modernization of the economy through banks, canals, railroads and tariffs to encourage the building of factories; he opposed the war with Mexico in 1846. After a series of highly publicized debates in 1858, during which Lincoln spoke out against the expansion of slavery, he lost the U.S. Senate race to his archrival, Democrat Stephen A. Douglas. Lincoln, a moderate from a swing state, secured the Republican Party presidential nomination in 1860. With very little support in the slave states, Lincoln swept the North and was elected president in 1860. His election prompted seven southern slave states to form the Confederacy before he took the office. No compromise or reconciliation was found regarding slavery. When the North enthusiastically rallied behind the national flag after the Confederate attack on Fort Sumter on April 12, 1861, Lincoln concentrated on the military and political dimensions of the war effort. His goal was to reunite the nation. He suspended habeas corpus, arresting and temporarily detaining thousands of suspected secessionists in the border states without trial. Lincoln averted British intervention by defusing the Trent Affair in late 1861. His numerous complex moves toward ending slavery centered on the Emancipation Proclamation in 1863, using the Army to protect escaped slaves, encouraging the border states to outlaw slavery, and helping push through Congress the Thirteenth Amendment to the United States Constitution, which permanently outlawed slavery. Lincoln closely supervised the war effort, especially the selection of top generals, including commanding general Ulysses S. Grant. He made the major decisions on Union war strategy. Lincoln's Navy set up a naval blockade that shut down the South's normal trade, helped take control of Kentucky and Tennessee, and gained control of the Southern river system using gunboats. Lincoln tried repeatedly to capture the Confederate capital at Richmond; each time a general failed, Lincoln substituted another, until finally Grant succeeded in 1865. An exceptionally astute politician deeply involved with power issues in each state, Lincoln reached out to "War Democrats" (who supported the North against the South), and managed his own re-election in the 1864 presidential election. As the leader of the moderate faction of the Republican party, Lincoln confronted Radical Republicans who demanded harsher treatment of the South, War Democrats who called for more compromise, antiwar Democrats called Copperheads who despised him, and irreconcilable secessionists who plotted his death. Politically, Lincoln fought back with patronage, by pitting his opponents against each other, and by appealing to the American people with his powers of oratory. His Gettysburg Address of 1863 became an iconic statement of America's dedication to the principles of nationalism, republicanism, equal rights, liberty, and democracy. Lincoln held a moderate view of Reconstruction, seeking to reunite the nation speedily through a policy of generous reconciliation in the face of lingering and bitter divisiveness. Six days after the surrender of Confederate commanding general Robert E. Lee, Lincoln was assassinated by John Wilkes Booth, a noted actor and Confederate sympathizer. Lincoln has been consistently ranked both by scholars and the public as one of the greatest U.S. presidents.

The right side of the page features a portrait of Abraham Lincoln, captioned "An 1863 daguerreotype of Lincoln, at the age of 54." Below the portrait is a summary of his political career, including his term as the 16th President of the United States (March 4, 1861 – April 15, 1865), his role as Vice President (Hannibal Hamlin, 1861–1865; Andrew Johnson, 1865), and his membership in the U.S. House of Representatives from Illinois's 7th district (March 4, 1847 – March 4, 1849). A "Personal details" section is also visible at the bottom right.

The left sidebar contains navigation links such as "Visit the main page", "WIKIPEDIA The Free Encyclopedia", "Main page", "Contents", "Featured content", "Current events", "Random article", "Donate to Wikipedia", "Wikimedia Shop", "Interaction", "Help", "About Wikipedia", "Community portal", "Recent changes", "Contact page", "Tools", "What links here", "Related changes", "Upload file", "Special pages", "Permanent link", "Page information", "Wikidata item", "Cite this page", "Print/export", "Create a book", "Download as PDF", "Printable version", and "Languages".

http://en.wikipedia.org/wiki/Abraham_Lincoln

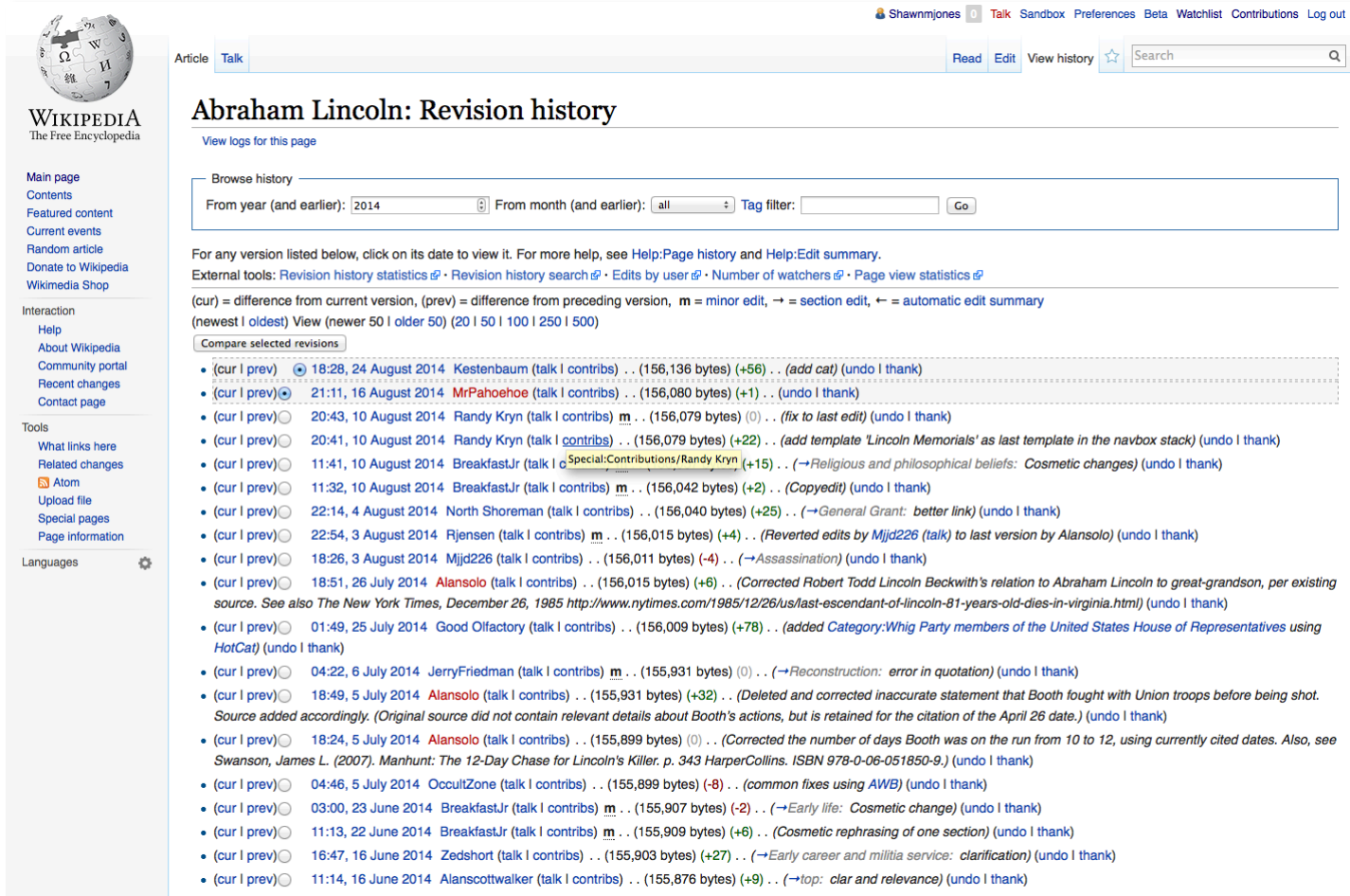
Wikis Are Edited By Multiple Authors, Resulting In Many Revisions...

The screenshot displays the 'Abraham Lincoln: Revision history' page on Wikipedia. At the top, there's a navigation bar with links for 'Shawnmjones', 'Talk', 'Sandbox', 'Preferences', 'Beta', 'Watchlist', 'Contributions', and 'Log out'. Below this is a search bar and a 'Read Edit View history' section. The main heading is 'Abraham Lincoln: Revision history', with a sub-link for 'View logs for this page'. A 'Browse history' form allows filtering by year (set to 2014), month, and tag filter. Below the form, there's a paragraph explaining version differences and external tools. A legend defines symbols like '(cur)', '(prev)', '(m)', '(+)', and '(*)'. A 'Compare selected revisions' button is present. The revision list follows, showing 20 entries with details like date, time, author, byte changes, and edit summaries. The most recent revision is selected.

Revision	Date	Author	Byte Change	Summary
(cur prev)	18:28, 24 August 2014	Kestenbaum (talk contribs)	(+56)	(add cat) (undo thank)
(cur prev)	21:11, 16 August 2014	MrPahoehoe (talk contribs)	(+1)	(undo thank)
(cur prev)	20:43, 10 August 2014	Randy Kryn (talk contribs)	(0)	(fix to last edit) (undo thank)
(cur prev)	20:41, 10 August 2014	Randy Kryn (talk contribs)	(+22)	(add template 'Lincoln Memorials' as last template in the navbox stack) (undo thank)
(cur prev)	11:41, 10 August 2014	BreakfastJr (talk contribs)	(+15)	(Religious and philosophical beliefs: Cosmetic changes) (undo thank)
(cur prev)	11:32, 10 August 2014	BreakfastJr (talk contribs)	(+2)	(Copyedit) (undo thank)
(cur prev)	22:14, 4 August 2014	North Shoreman (talk contribs)	(+25)	(General Grant: better link) (undo thank)
(cur prev)	22:54, 3 August 2014	Rjensen (talk contribs)	(+4)	(Reverted edits by Mjrd226 (talk) to last version by Alansolo) (undo thank)
(cur prev)	18:26, 3 August 2014	Mjrd226 (talk contribs)	(-4)	(Assassination) (undo thank)
(cur prev)	18:51, 26 July 2014	Alansolo (talk contribs)	(+6)	(Corrected Robert Todd Lincoln Beckwith's relation to Abraham Lincoln to great-grandson, per existing source. See also The New York Times, December 26, 1985 http://www.nytimes.com/1985/12/26/us/last-escendant-of-lincoln-81-years-old-dies-in-virginia.html) (undo thank)
(cur prev)	01:49, 25 July 2014	Good Olfactory (talk contribs)	(+78)	(added Category:Whig Party members of the United States House of Representatives using HotCat) (undo thank)
(cur prev)	04:22, 6 July 2014	JerryFriedman (talk contribs)	(0)	(Reconstruction: error in quotation) (undo thank)
(cur prev)	18:49, 5 July 2014	Alansolo (talk contribs)	(+32)	(Deleted and corrected inaccurate statement that Booth fought with Union troops before being shot. Source added accordingly. (Original source did not contain relevant details about Booth's actions, but is retained for the citation of the April 26 date.) (undo thank)
(cur prev)	18:24, 5 July 2014	Alansolo (talk contribs)	(0)	(Corrected the number of days Booth was on the run from 10 to 12, using currently cited dates. Also, see Swanson, James L. (2007). Manhunt: The 12-Day Chase for Lincoln's Killer. p. 343 HarperCollins. ISBN 978-0-06-051850-9.) (undo thank)
(cur prev)	04:46, 5 July 2014	OccultZone (talk contribs)	(-8)	(common fixes using AWB) (undo thank)
(cur prev)	03:00, 23 June 2014	BreakfastJr (talk contribs)	(-2)	(Early life: Cosmetic change) (undo thank)
(cur prev)	11:13, 22 June 2014	BreakfastJr (talk contribs)	(+6)	(Cosmetic rephrasing of one section) (undo thank)
(cur prev)	16:47, 16 June 2014	Zedshort (talk contribs)	(+27)	(Early career and militia service: clarification) (undo thank)
(cur prev)	11:14, 16 June 2014	Alanscottwaiker (talk contribs)	(+9)	(top: clar and relevance) (undo thank)

http://en.wikipedia.org/w/index.php?title=Abraham_Lincoln&action=history

Most Interesting: Wikis Keep EVERY REVISION OF A PAGE!!!



Shawnmjones Talk Sandbox Preferences Beta Watchlist Contributions Log out

Article Talk Read Edit View history

Abraham Lincoln: Revision history

[View logs for this page](#)

Browse history

From year (and earlier): From month (and earlier): Tag filter:

For any version listed below, click on its date to view it. For more help, see [Help:Page history](#) and [Help:Edit summary](#).

External tools: [Revision history statistics](#) · [Revision history search](#) · [Edits by user](#) · [Number of watchers](#) · [Page view statistics](#)

(cur) = difference from current version, (prev) = difference from preceding version, m = minor edit, → = section edit, ← = automatic edit summary
(newest | oldest) View (newer 50 | older 50) (20 | 50 | 100 | 250 | 500)

- (cur | prev) **18:28, 24 August 2014** [Kestenbaum](#) (talk | contribs) . . (156,136 bytes) (+56) . . *(add cat)* (undo | thank)
- (cur | prev) **21:11, 16 August 2014** [MrPahoehoe](#) (talk | contribs) . . (156,080 bytes) (+1) . . (undo | thank)
- (cur | prev) **20:43, 10 August 2014** [Randy Kryn](#) (talk | contribs) **m** . . (156,079 bytes) (0) . . *(fix to last edit)* (undo | thank)
- (cur | prev) **20:41, 10 August 2014** [Randy Kryn](#) (talk | contribs) . . (156,079 bytes) (+22) . . *(add template 'Lincoln Memorials' as last template in the navbox stack)* (undo | thank)
- (cur | prev) **11:41, 10 August 2014** [BreakfastJr](#) (talk | contribs) **e** [Special:Contributions/Randy Kryn](#) (+15) . . *(→Religious and philosophical beliefs: Cosmetic changes)* (undo | thank)
- (cur | prev) **11:32, 10 August 2014** [BreakfastJr](#) (talk | contribs) **m** . . (156,042 bytes) (+2) . . *(Copyedit)* (undo | thank)
- (cur | prev) **22:14, 4 August 2014** [North Shoreman](#) (talk | contribs) . . (156,040 bytes) (+25) . . *(→General Grant: better link)* (undo | thank)
- (cur | prev) **22:54, 3 August 2014** [Rjensen](#) (talk | contribs) **m** . . (156,015 bytes) (+4) . . *(Reverted edits by Mjrd226 (talk) to last version by Alansolo)* (undo | thank)
- (cur | prev) **18:26, 3 August 2014** [Mjrd226](#) (talk | contribs) . . (156,011 bytes) (-4) . . *(→Assassination)* (undo | thank)
- (cur | prev) **18:51, 26 July 2014** [Alansolo](#) (talk | contribs) . . (156,015 bytes) (+6) . . *(Corrected Robert Todd Lincoln Beckwith's relation to Abraham Lincoln to great-grandson, per existing source. See also The New York Times, December 26, 1985 http://www.nytimes.com/1985/12/26/us/last-escendant-of-lincoln-81-years-old-dies-in-virginia.html)* (undo | thank)
- (cur | prev) **01:49, 25 July 2014** [Good Olfactory](#) (talk | contribs) . . (156,009 bytes) (+78) . . *(added Category:Whig Party members of the United States House of Representatives using HotCat)* (undo | thank)
- (cur | prev) **04:22, 6 July 2014** [JerryFriedman](#) (talk | contribs) **m** . . (155,931 bytes) (0) . . *(→Reconstruction: error in quotation)* (undo | thank)
- (cur | prev) **18:49, 5 July 2014** [Alansolo](#) (talk | contribs) . . (155,931 bytes) (+32) . . *(Deleted and corrected inaccurate statement that Booth fought with Union troops before being shot. Source added accordingly. (Original source did not contain relevant details about Booth's actions, but is retained for the citation of the April 26 date.)* (undo | thank)
- (cur | prev) **18:24, 5 July 2014** [Alansolo](#) (talk | contribs) . . (155,899 bytes) (0) . . *(Corrected the number of days Booth was on the run from 10 to 12, using currently cited dates. Also, see Swanson, James L. (2007). Manhunt: The 12-Day Chase for Lincoln's Killer. p. 343 HarperCollins. ISBN 978-0-06-051850-9.)* (undo | thank)
- (cur | prev) **04:46, 5 July 2014** [OccultZone](#) (talk | contribs) . . (155,899 bytes) (-8) . . *(common fixes using AWB)* (undo | thank)
- (cur | prev) **03:00, 23 June 2014** [BreakfastJr](#) (talk | contribs) **m** . . (155,907 bytes) (-2) . . *(→Early life: Cosmetic change)* (undo | thank)
- (cur | prev) **11:13, 22 June 2014** [BreakfastJr](#) (talk | contribs) **m** . . (155,909 bytes) (+6) . . *(Cosmetic rephrasing of one section)* (undo | thank)
- (cur | prev) **16:47, 16 June 2014** [Zedshort](#) (talk | contribs) . . (155,903 bytes) (+27) . . *(→Early career and militia service: clarification)* (undo | thank)
- (cur | prev) **11:14, 16 June 2014** [Alanscottwaiker](#) (talk | contribs) . . (155,876 bytes) (+9) . . *(→top: clar and relevance)* (undo | thank)

http://en.wikipedia.org/w/index.php?title=Abraham_Lincoln&action=history

With Every Revision Preserved, One Can Visit Old Revisions Of Pages

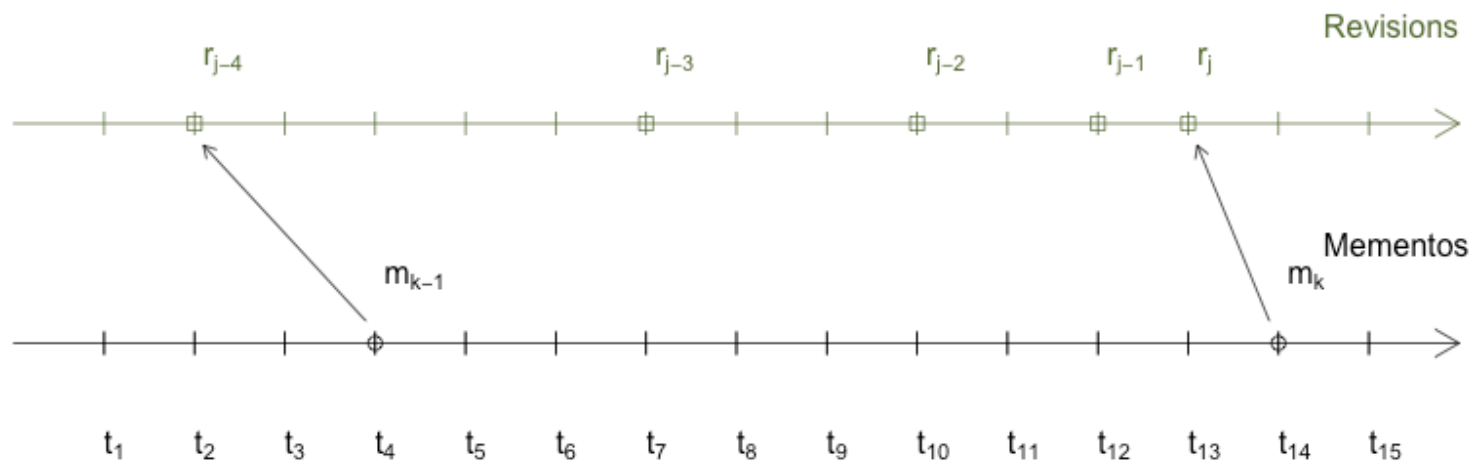


The screenshot shows the Wikipedia article for Abraham Lincoln. At the top right, there are user links for 'Shawnmjones' and navigation options like 'Talk', 'Sandbox', 'Preferences', 'Beta', 'Watchlist', 'Contributions', and 'Log out'. Below this is a search bar and navigation tabs for 'Article' and 'Talk'. The article title 'Abraham Lincoln' is prominently displayed. A red banner at the top of the article content reads: 'This is an old revision of this page, as edited by The Cunctator (talk | contribs) at 01:01, 4 November 2001 (*Hooray for Lincoln!). It may differ significantly from the current revision.' Below the banner, there are links for '(diff) ← Previous revision | Latest revision (diff) | Newer revision → (diff)'. The main text of the article begins with 'Abraham Lincoln was the 16th (1861-1865) President of the United States, and the first President from the Republican Party.' It includes a link to a thumbnail image, a note about a public domain picture, and several paragraphs of text. A list of previous and next presidents is provided at the bottom of the main text. The left sidebar contains various navigation and tool links. At the bottom of the page, there are logos for Wikimedia and MediaWiki, and a footer with privacy policy and other site information.

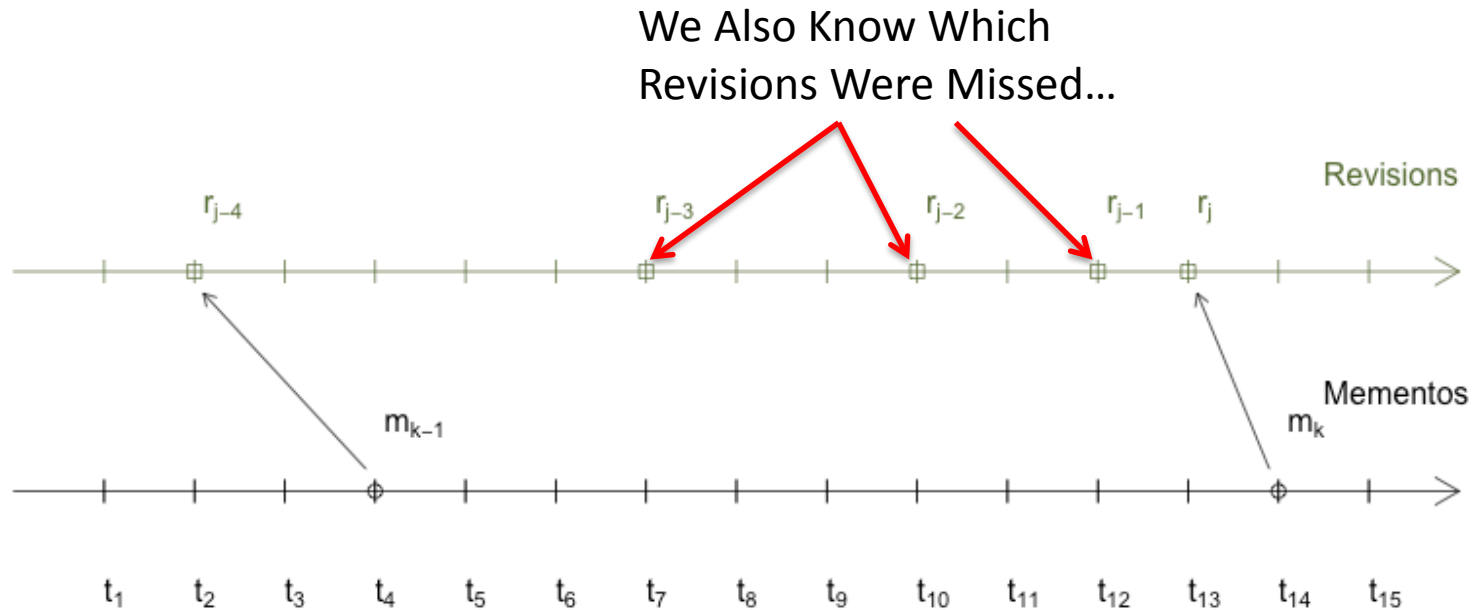
This is an old revision of this page, as edited by The Cunctator (talk | contribs) at 01:01, 4 November 2001 (*Hooray for Lincoln!). It may differ significantly from the current revision.

[http://en.wikipedia.org/w/index.php?title=Abraham Lincoln&oldid=345783631](http://en.wikipedia.org/w/index.php?title=Abraham_Lincoln&oldid=345783631)

For A Wiki, Every Web Archive Memento Can Be Tied To A Wiki Revision

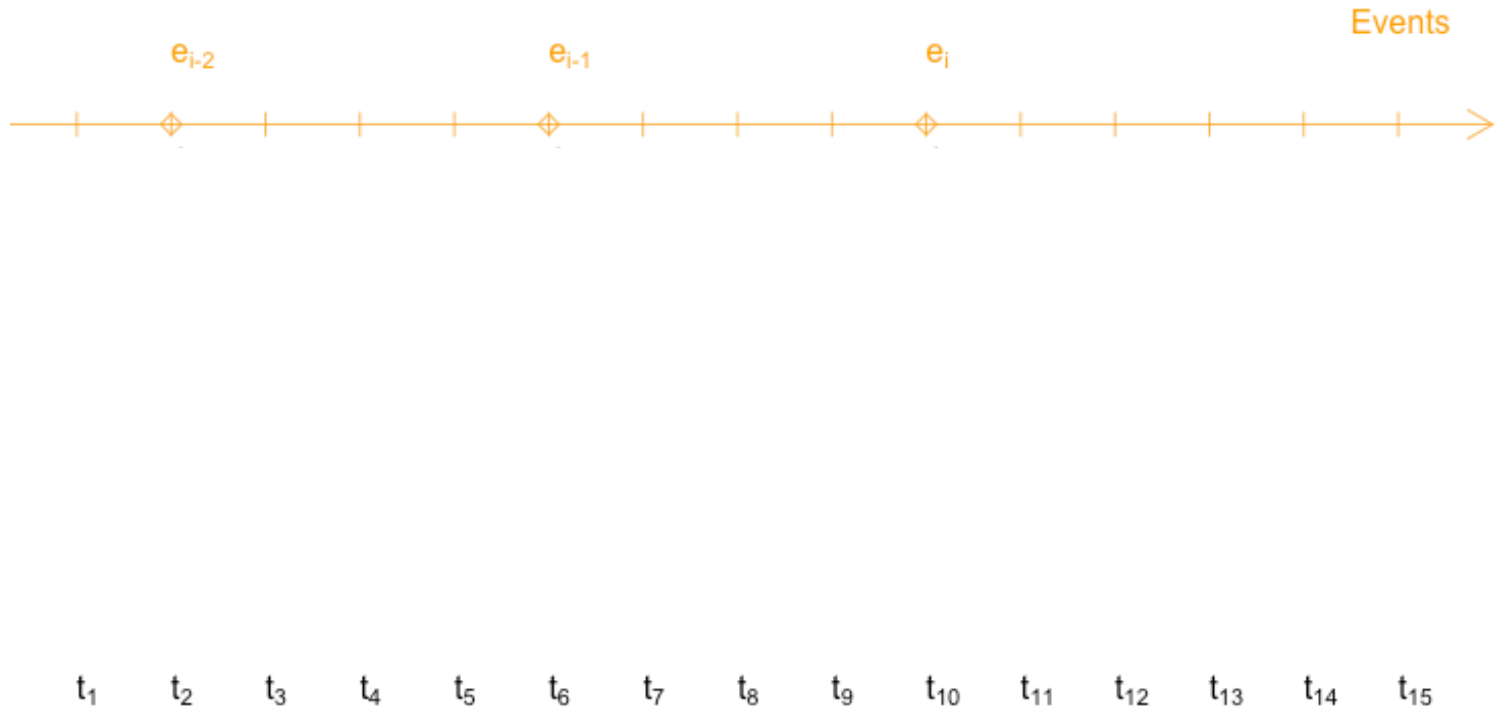


For A Wiki, Every Web Archive Memento Can Be Tied To A Wiki Revision

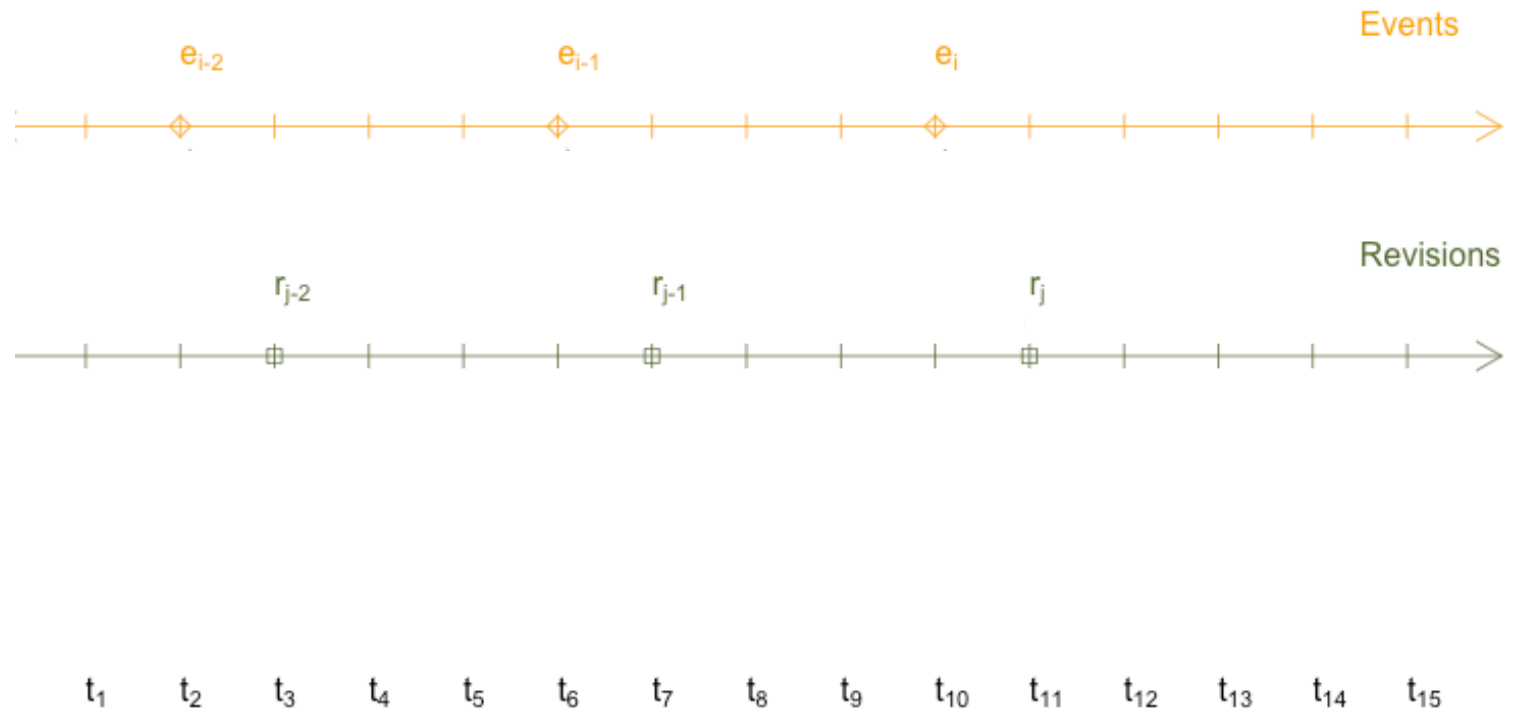


The Web Archives Are Sampling The Wiki Revisions...

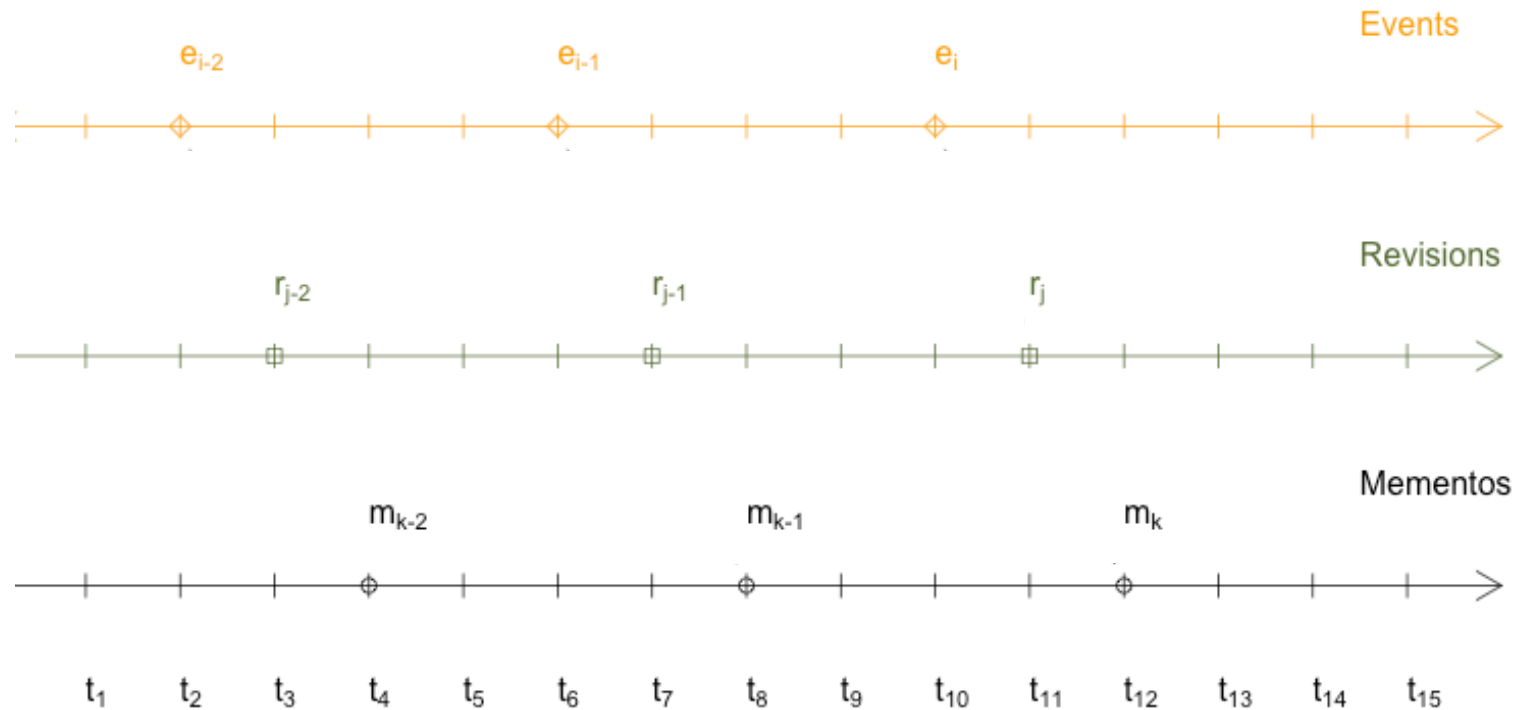
Consider The Timeline Of Every Episode In A Series



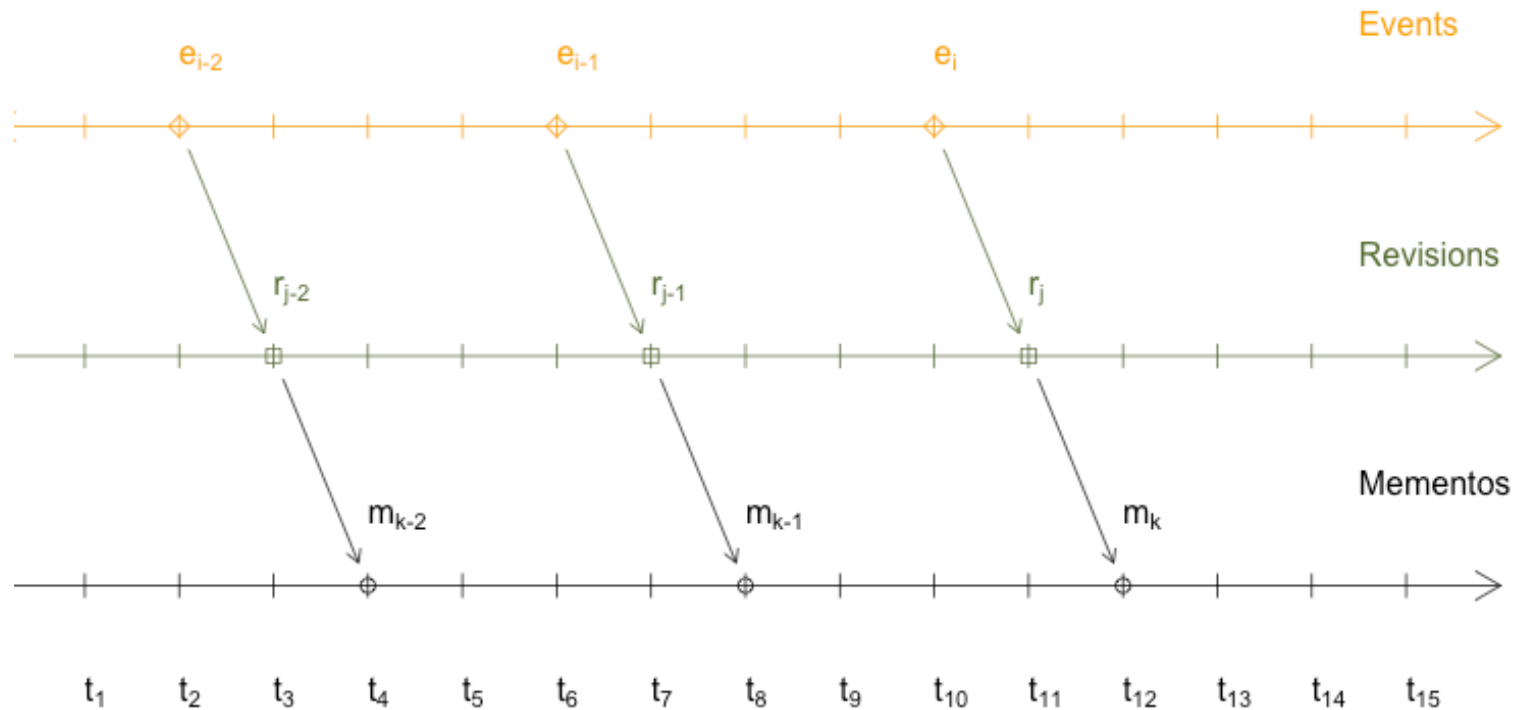
Now Consider A Timeline Of Wiki Revisions Created By Fans



Finally Consider A Third Timeline For Mementos Created From Those Revisions



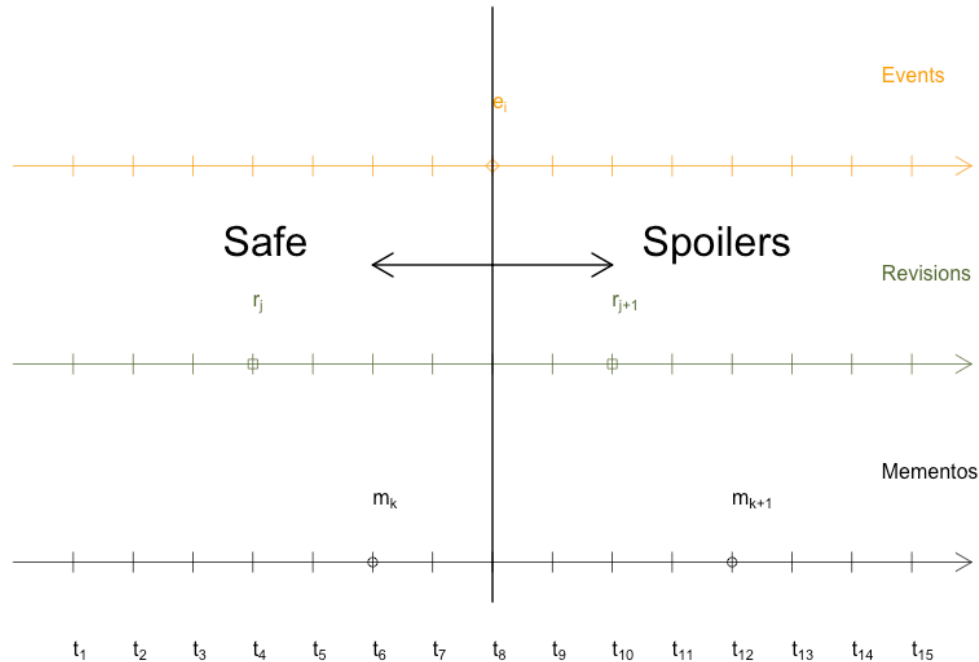
Steiner Noticed That Events Inspire Wiki Revisions



... or *episodes* inspire wiki edits.

<http://arxiv.org/abs/1303.4702>

Bringing Us To The Naïve Spoiler Concept: Revisions After An Episode Contain Spoilers



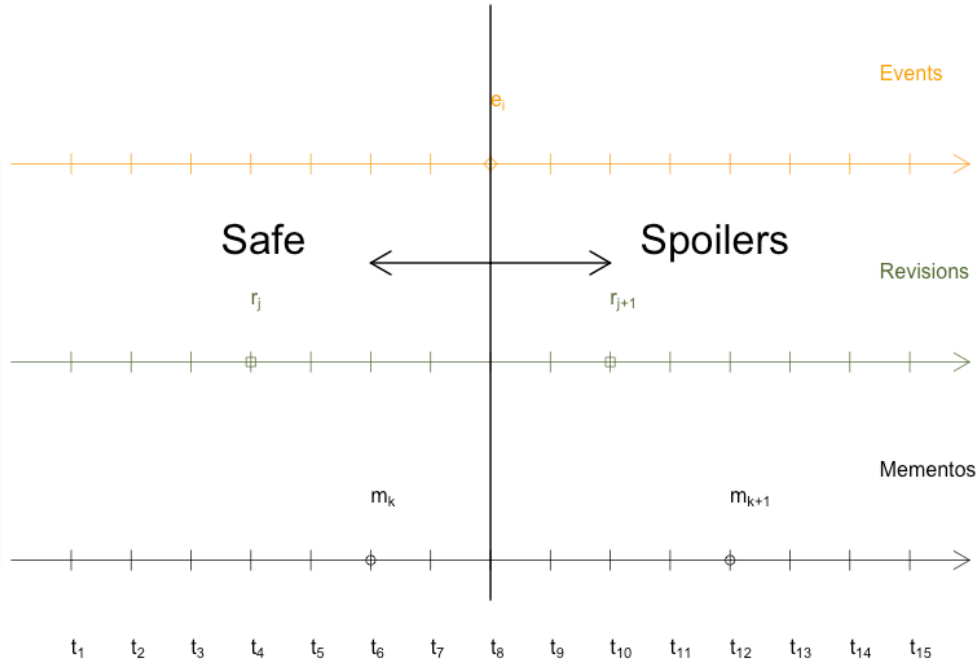
$$t_{r_j} \geq t_{e_i} \implies \textit{spoiler}$$

$$t_{r_j} < t_{e_i} \implies \textit{safe}$$

Bringing Us To The Naïve Spoiler Concept: Revisions After An Episode Contain Spoilers



Alive



Joffrey lies dead in his mother's arms after drinking wine poisoned with the strangler.

Deceased

$$t_{r_j} \geq t_{e_i} \implies \textit{spoiler}$$

$$t_{r_j} < t_{e_i} \implies \textit{safe}$$

- Background
- **Related Work**
- TimeGate Heuristics
- Theory of Spoiler Probability
- Measurements of Spoiler Probability
- Spoilers In The Wayback Machine
- The Memento MediaWiki Extension
- Future Work
- Conclusions

We Are Not The Only Ones Seeking To Avoid Spoilers...

RELATED WORK

So, What Have Others Done About Spoilers?

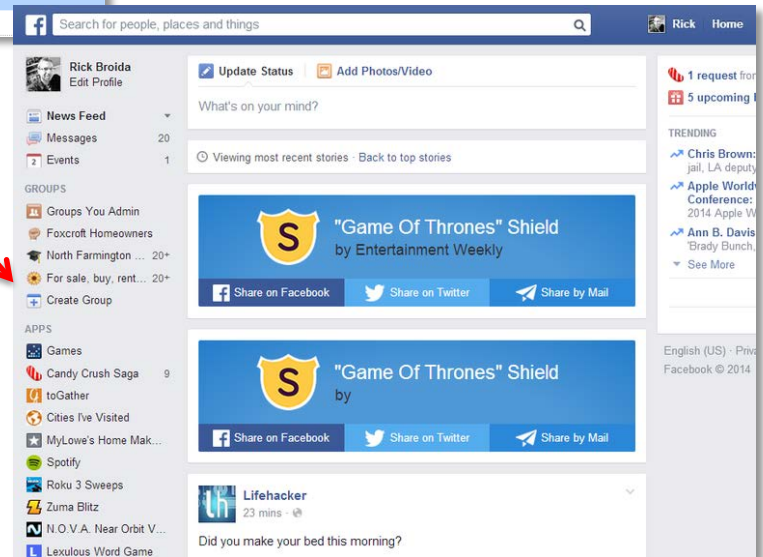
Hidden Text!!!

- Will They or Won't They?: Jim and Pam. They did, sometime between seasons 3 and 4).
 - Andy and Erin.
 - Michael and Holly also seemed poised to become this until they began going out a few episodes in (which Michael hilariously lampshades):
Michael: "Why are you helping her? You're not even dating." She's my friend... and... ultimately my strategy is to merge this into a relationship... without her even knowing.
They will.
 - Andy and Erin have finally gotten together too.
 - Although Erin dumps Andy in season 9.

TO EVERYONE WHO WILL NOT RECEIVE *SERIES 4 OF DOWNTON ABBEY* UNTIL JANUARY 2014, THIS IS A **WARNING**: THIS WIKI WILL BE UPDATED AND EDITED AS THE EPISODES BROADCAST IN THE UNITED KINGDOM (SEPTEMBER - DECEMBER 2013)! PROCEED AT YOUR OWN RISK! **THERE WILL BE SPOILERS ABUNDANT ON MOST OF THE PAGES!** YOU HAVE BEEN WARNED!

Spoiler Notices!!!

Blocking Social Media Posts!



Existing Academic Studies Have Dealt With Social Media

- Separate studies conducted by Johns and the team of Schirra, Sun, and Bently studied two-screen viewing
- Boyd-Graber, Glasgow, and Zajac attempted to use machine learning to find spoilers in social media
- To avoid spoilers fans would avoid, or abandon:
 - Social media
 - Online web pages
 - TV shows
- This results in lost revenue to advertisers!

Our Goals

- Work with wikis, not social media
- Not just warn the user!
- Not hide the data!
- Show the user what existed before the spoiler was revealed, **so the resource is still useful.**

- Background
- Related Work
- **TimeGate Heuristics**
- Theory of Spoiler Probability
- Measurements of Spoiler Probability
- Spoilers In The Wayback Machine
- The Memento MediaWiki Extension
- Future Work
- Conclusions

TimeGates Hold The Key To Avoiding Spoilers

TIMEGATE HEURISTICS

TimeGates Can Be Represented By A Function

$$M = \mathcal{G}^h(R, t_a)$$

M = memento returned (URI-M)

R = original resource (URI-R)

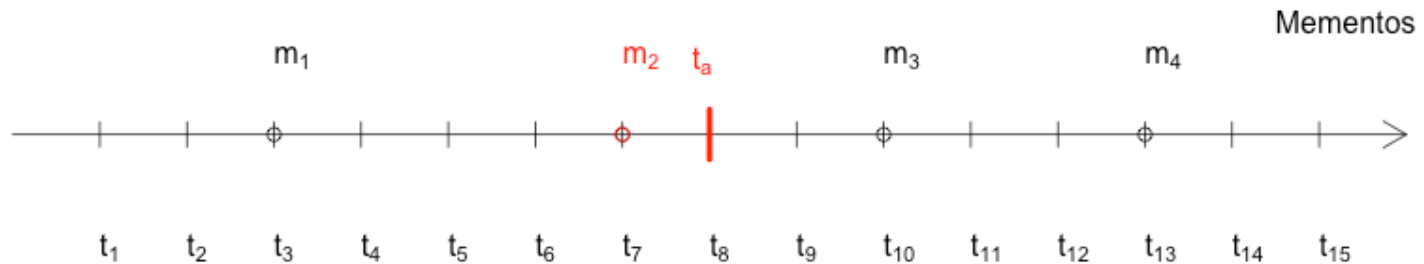
t_a = desired datetime

h = heuristic being used for TimeGate

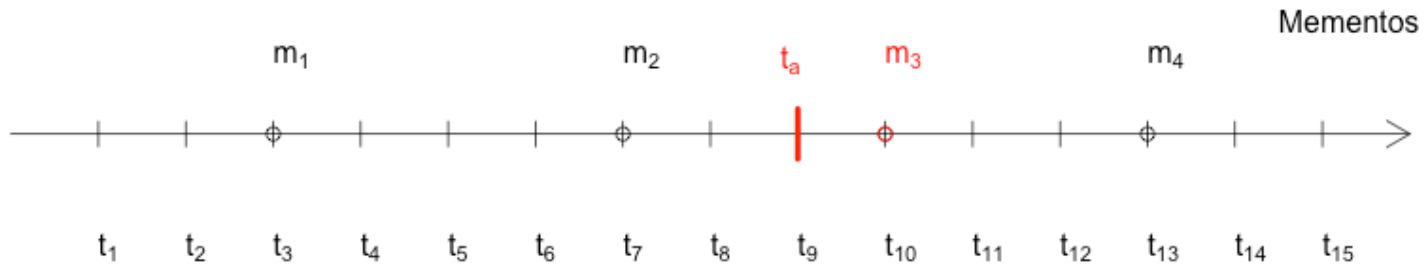
mindist Is The Most Widely Used Heuristic

Minimum Distance From t_a With No Bounds

$$\mathcal{G}^{mindist}(R, t_8) = m_2 @ t_7$$



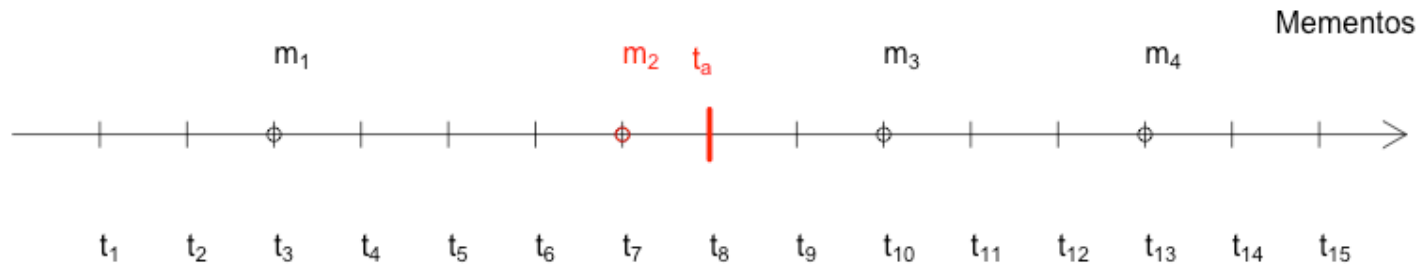
$$\mathcal{G}^{mindist}(R, t_9) = m_3 @ t_{10}$$



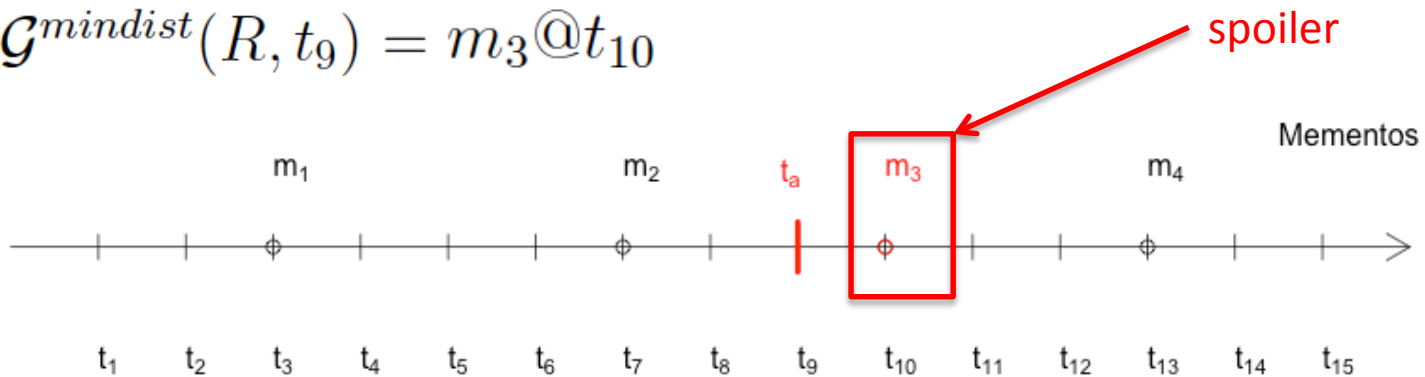
But mindist Can Lead To Spoilers...

Minimum Distance – no bounds

$$\mathcal{G}^{mindist}(R, t_8) = m_2 @ t_7$$

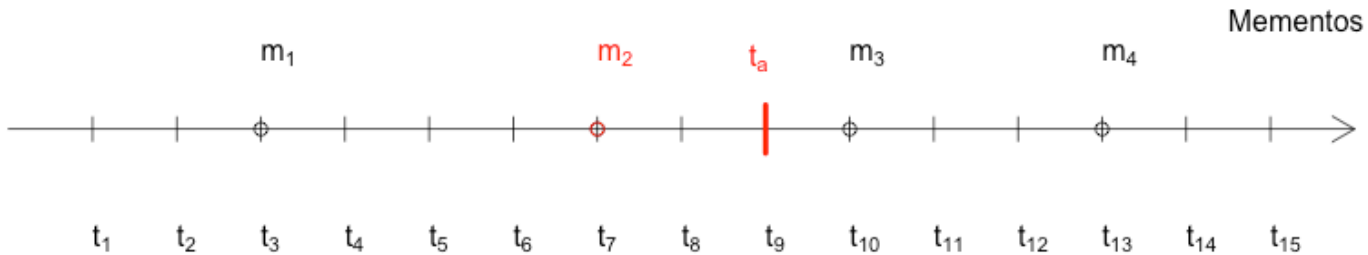


$$\mathcal{G}^{mindist}(R, t_9) = m_3 @ t_{10}$$



minpast Does Not Lead To Spoilers

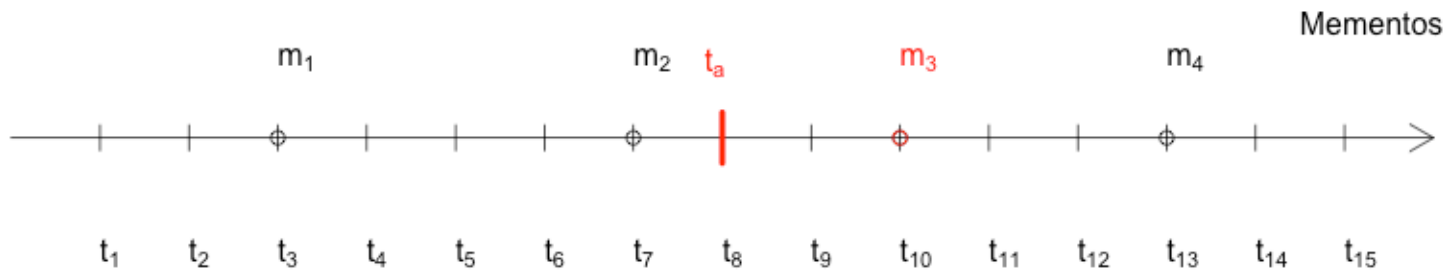
Minimum Distance In The Past Where Upper Bound = t_a



$$\mathcal{G}^{minpast}(R, t_8) = m_2@t_7$$

minfutr Is The Opposite Of minpast

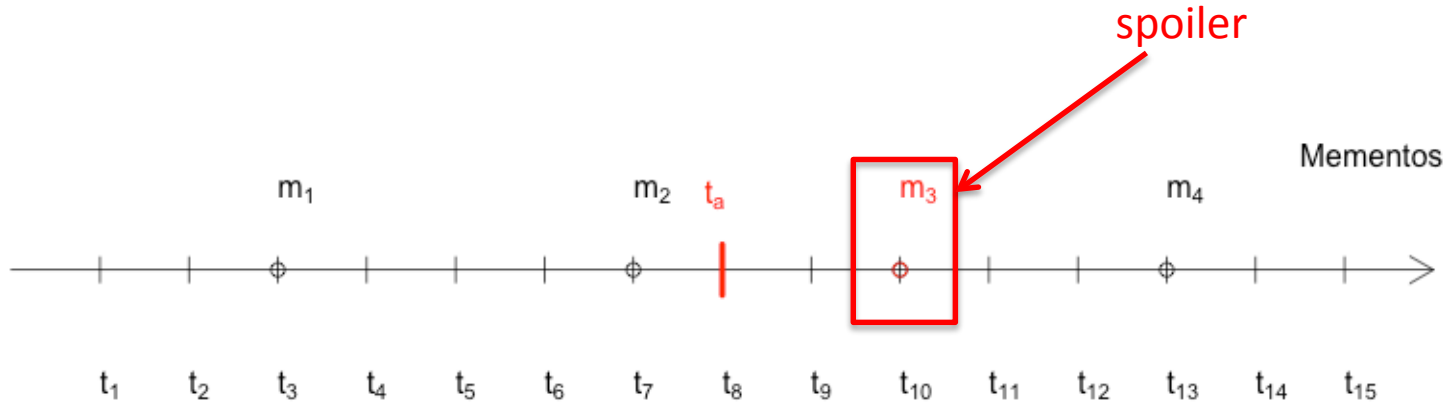
Minimum Distance In The Future Where Lower Bound = t_a



$$\mathcal{G}^{minfutr}(R, t_8) = m_3 @ t_{10}$$

minfutr Always Leads To Spoilers

Minimum Distance In The Future Where Lower Bound = t_a



$$\mathcal{G}^{minfutr}(R, t_8) = m_3 @ t_{10}$$

Other Heuristics Can Lead To Spoilers

- **minnear** – bounds specified by user/system
- **eqpast** – compare on both sides of t_a , pick past if equal, mindist if not
- **eqfutr** – compare on both sides of t_a , pick future if equal, mindist if not
- **simpast** – compare on both sides of t_a , pick past if similar, mindist if not
- **simfutr** – compare on both sides of t_a , pick future if similar, mindist if not

We Compared These Heuristics Based On Performance And Spoiler Avoidance

TABLE 7: Summary of TimeGate Heuristics

Heuristic	Uses cost metric	Uses Content of Mementos	Potential running time	Reliably avoids spoilers?
mindist	X		$O(n)$	no
minpast	X		$O(n)$	yes
minfutr	X		$O(n)$	no
minnear	X		$O(n)$	no
eqfutr	X	X	$O(n + c)$	no
eqpast	X	X	$O(n + c)$	no
simfutr	X	X	$O(f + n)$	no
simpast	X	X	$O(f + n)$	no

Even If Modified To Default To minpast, These Heuristics Perform More Poorly

TABLE 7: Summary of TimeGate Heuristics

Heuristic	Uses cost metric	Uses Content of Mementos	Potential running time	Reliably avoids spoilers?
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minpast	X		$O(n)$	yes
minfutr	X		$O(n)$	no
minnear	X		$O(n)$	no
eqfutr	X	X	$O(n + c)$	no
eqpast	X	X	$O(n + c)$	no
simfutr	X	X	$O(f + n)$	no
simpast	X	X	$O(f + n)$	no

minpast Is Best For Avoiding Spoilers

TABLE 7: Summary of TimeGate Heuristics

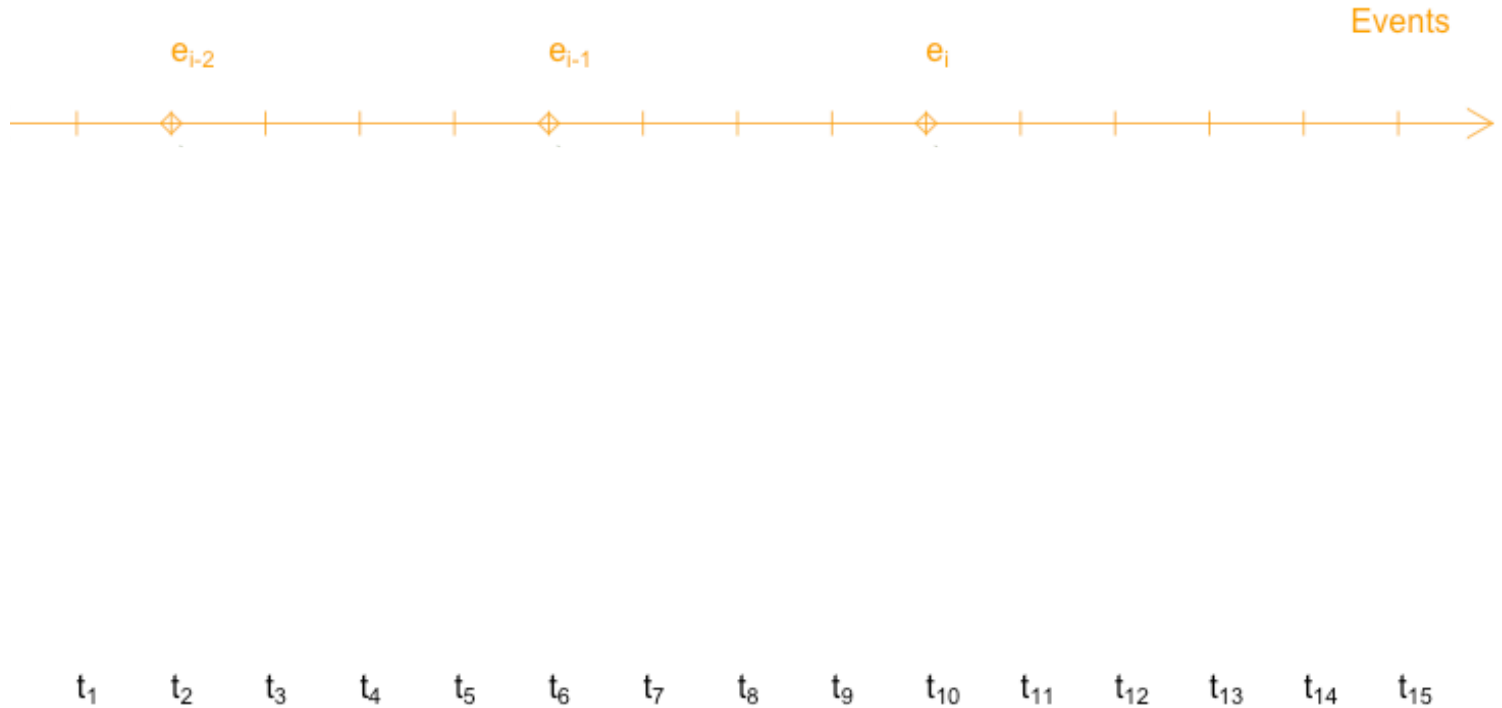
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minnear	X		$O(n)$	no
eqfutr	X	X	$O(n + c)$	no
eqpast	X	X	$O(n + c)$	no
simfutr	X	X	$O(f + n)$	no
simpast	X	X	$O(f + n)$	no

- Background
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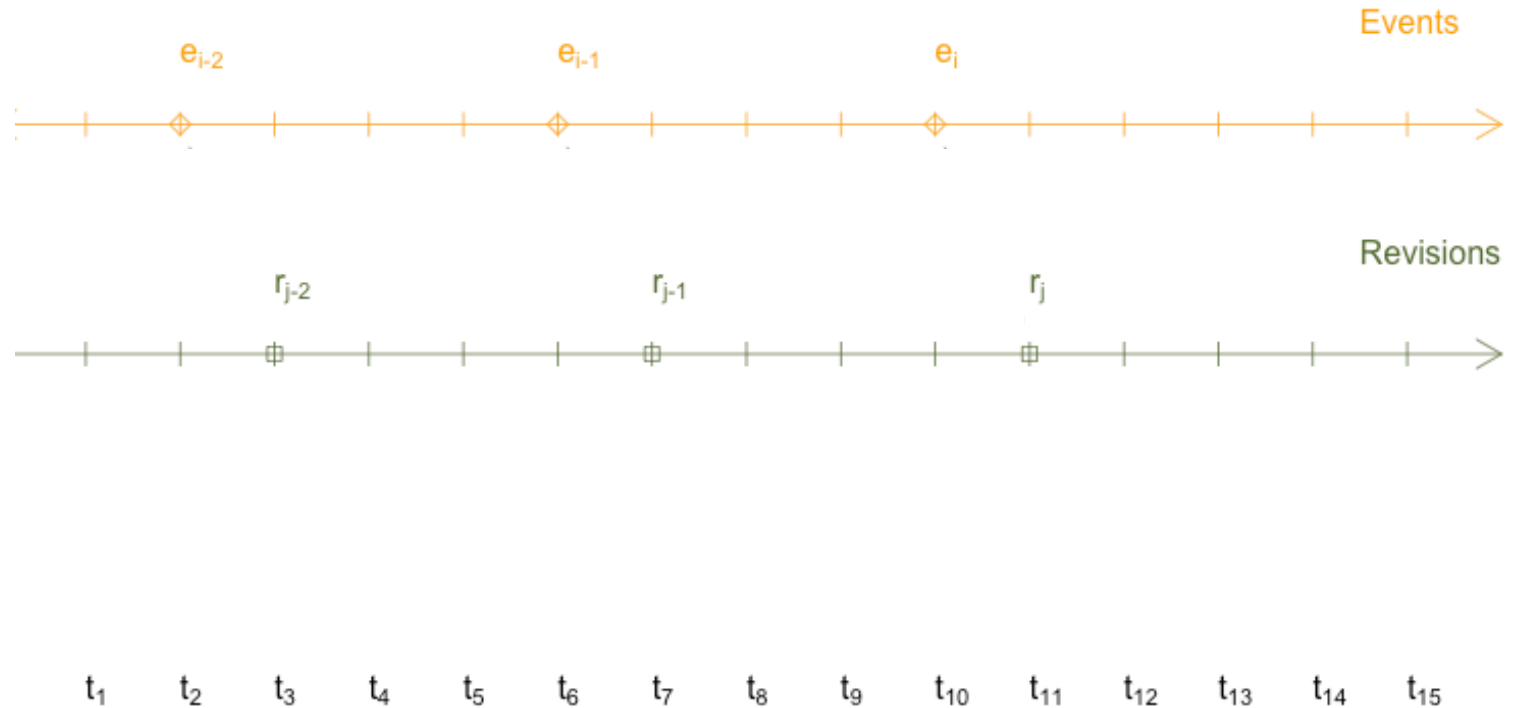
Using mindist Can Be Hazardous For Avoiding Spoilers

THEORY OF SPOILER PROBABILITY

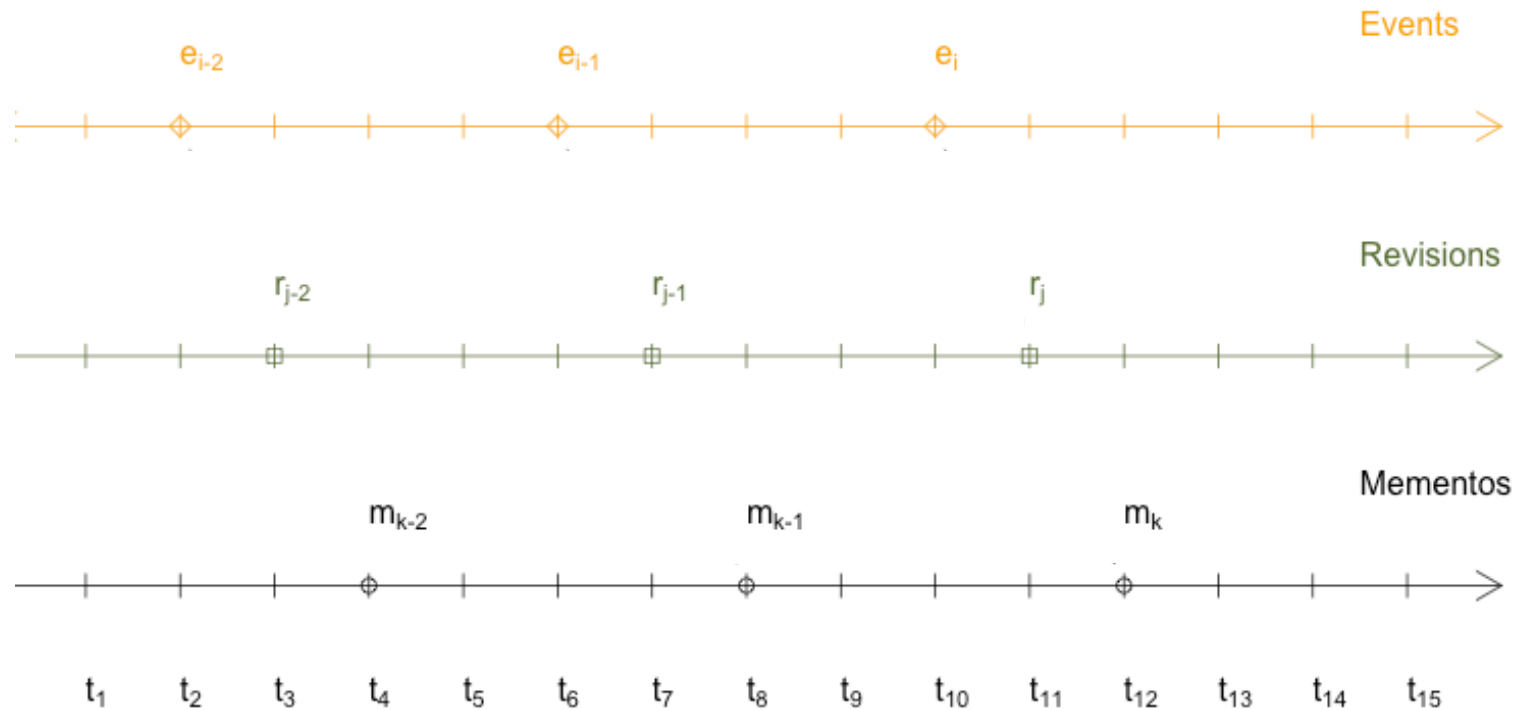
Remember: Consider The Timeline Of Every Episode In A Series



Remember: Consider A Timeline Of Wiki Revisions Created By Fans



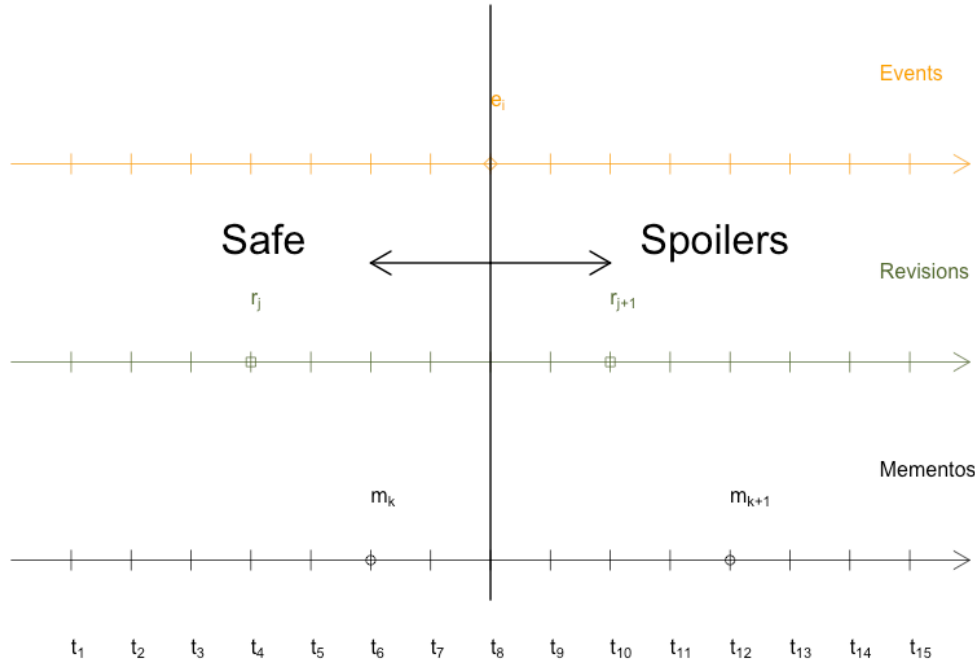
Remember: Consider A Third Timeline For Mementos Created From Those Revisions



Remember Our Naïve Spoiler Concept



Alive



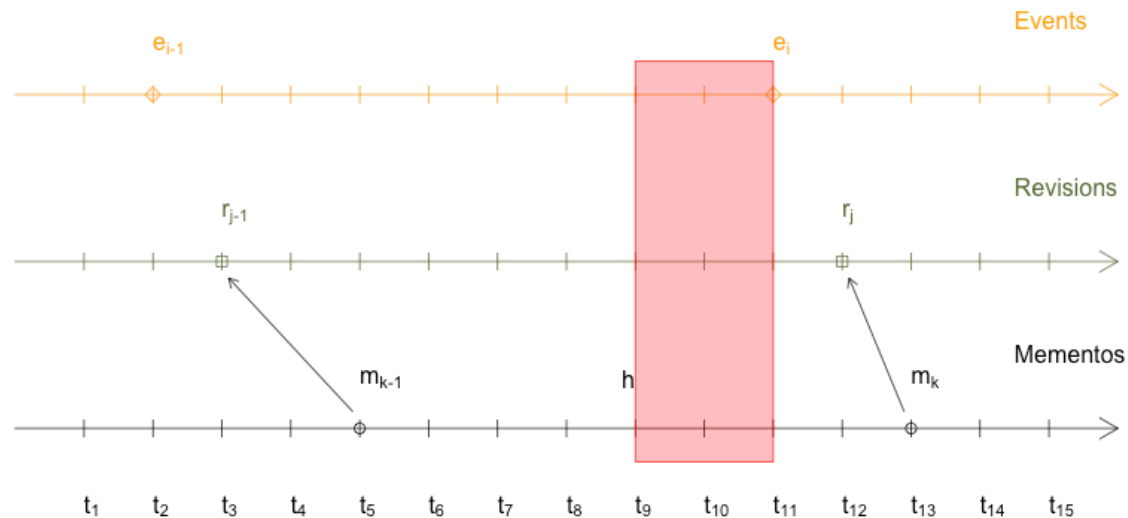
Joffrey lies dead in his mother's arms after drinking wine poisoned with the strangler.

Deceased

$$t_{r_j} \geq t_{e_i} \implies \textit{spoiler}$$

$$t_{r_j} < t_{e_i} \implies \textit{safe}$$

Spoiler Areas Exist Where mindist Returns The User A Memento From The Future Of Their Desired Datetime



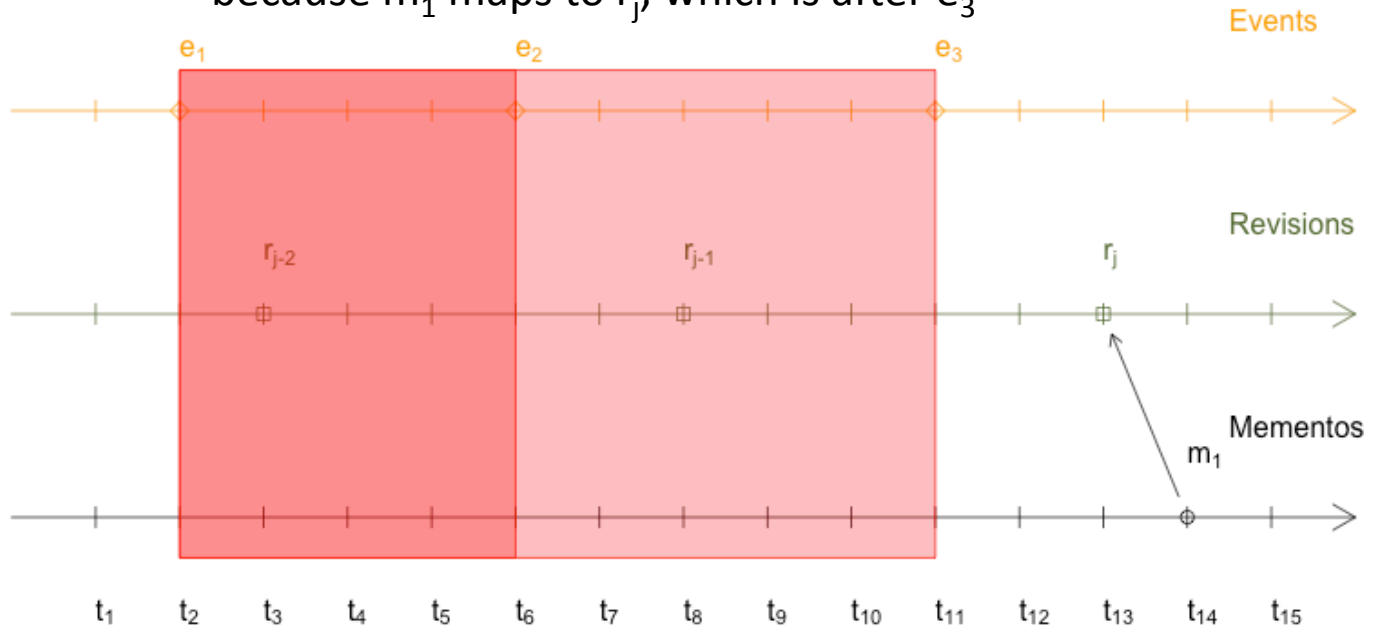
In this example, using mindist, if the user requests a memento with a datetime between t_9 and t_{11} , denoted by the red area, they will get m_k (which is r_j), which exists in the future, even though they chose a datetime **before** m_k !

Conditions Arising From These Timelines Are Defined By When They Occur

- Pre-Archive – occurs prior to first memento
- Archive-Extant – occurs after first memento
- Post-Archive – occurs after last memento

Condition: Pre Archive Spoiler Area

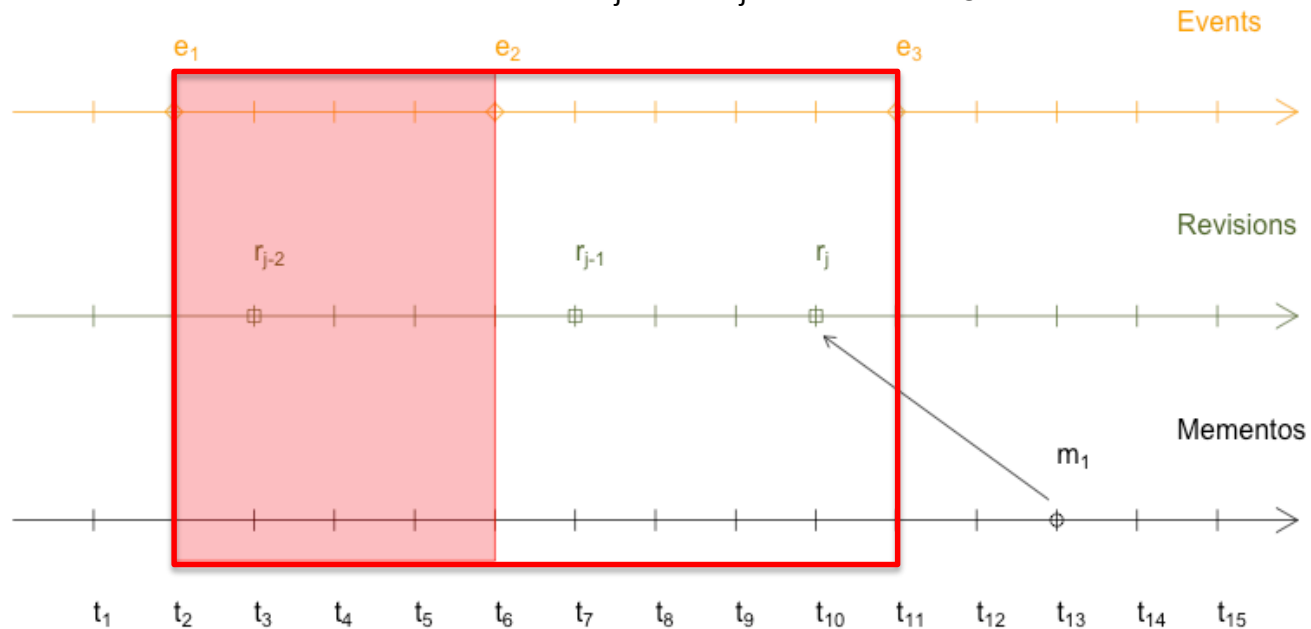
Spoiler area exists for e_3 , and one still exists for e_2 because m_1 maps to r_j , which is after e_3



$$[t_s, t_f] = \mathcal{S}_a(e_i) = \begin{cases} (t_{e_1}, t_{e_i}) & \text{if } t_{e_i} < t_{r_j} \wedge r_j \equiv m_k \\ (0, 0) & \text{otherwise} \end{cases}$$

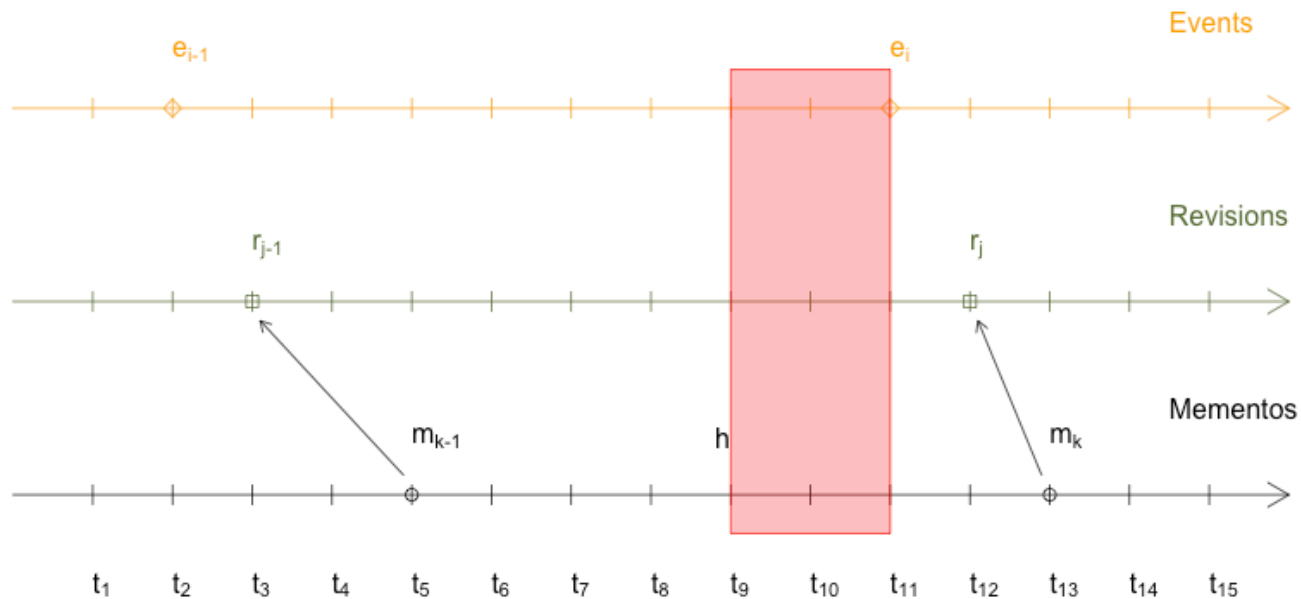
Condition: Pre Archive Safe Area

No spoiler area for e_3 , but one still exists for e_2 because m_1 maps to r_j , but r_j is before e_3



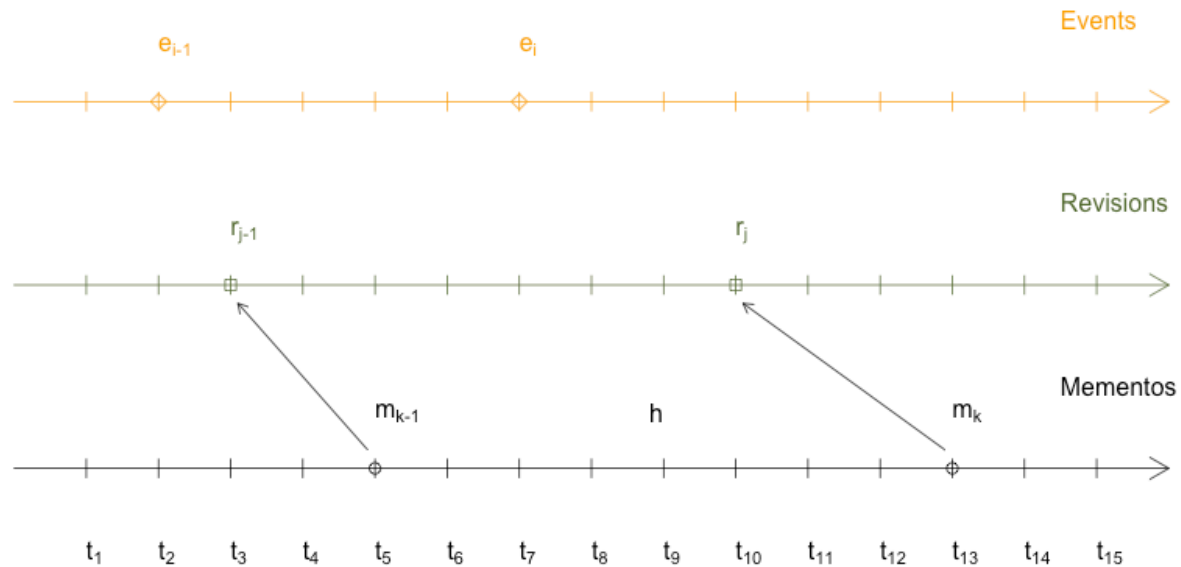
$$[t_s, t_f] = \mathcal{S}_a(e_i) = \begin{cases} (t_{e_1}, t_{e_i}) & \text{if } t_{e_i} < t_{r_j} \wedge r_j \equiv m_k \\ (0, 0) & \text{otherwise} \end{cases}$$

Condition: Archive Extant Spoiler Area



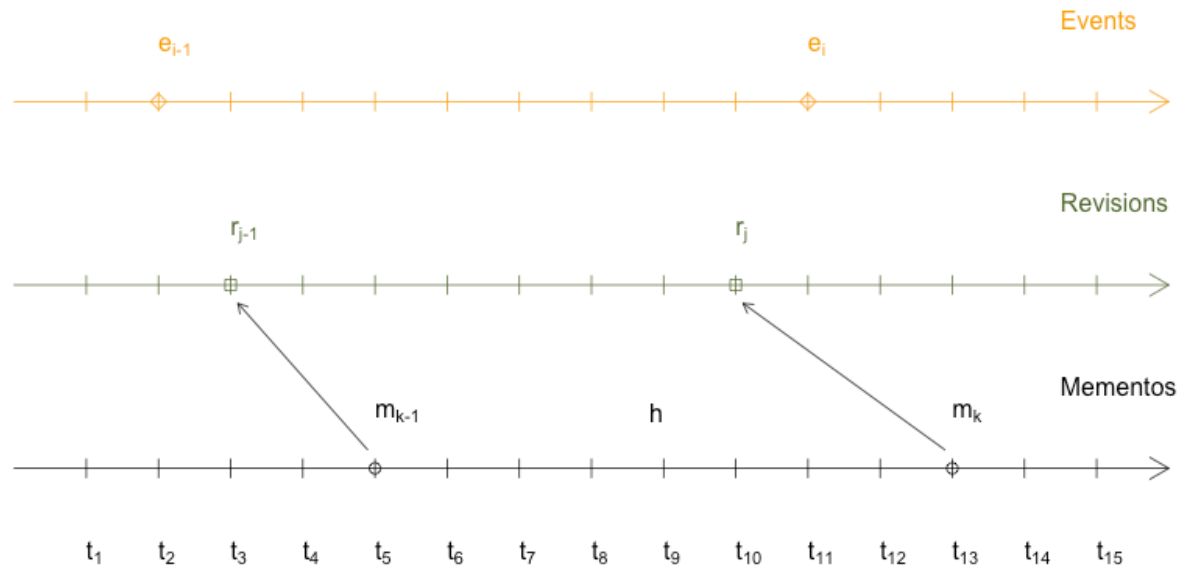
$$[t_s, t_f] = \mathcal{S}_b(e) = \begin{cases} (t_h, t_e) & \text{if } t_h < t_e < t_{r_i} \wedge r_j \equiv m_k \wedge \\ & t_h = \frac{t_{m_{k-1}} + t_{m_k}}{2} \\ (0, 0) & \text{otherwise} \end{cases}$$

Condition: Archive Extant Safe Area EHR



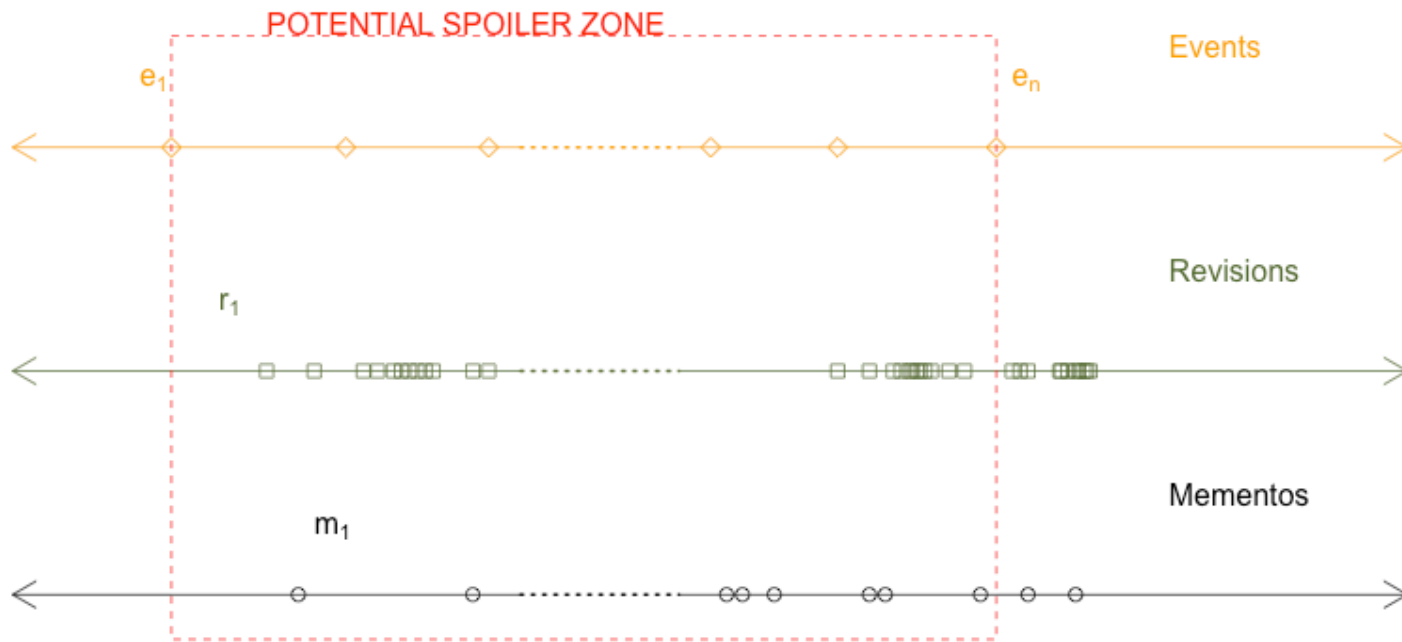
$$[t_s, t_f] = \mathcal{S}_b(e) = \begin{cases} (t_h, t_e) & \text{if } t_h < t_e < t_{r_i} \wedge r_j \equiv m_k \wedge \\ & t_h = \frac{t_{m_{k-1}} + t_{m_k}}{2} \\ (0, 0) & \text{otherwise} \end{cases}$$

Condition: Archive Extant Safe Area HRE

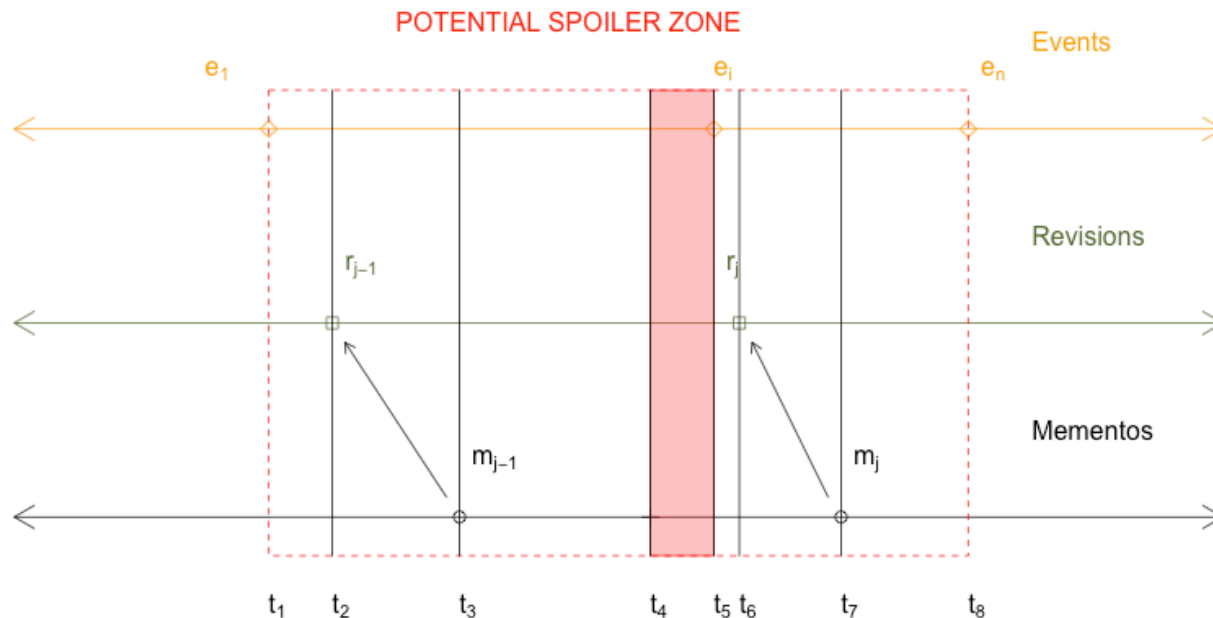


$$[t_s, t_f] = \mathcal{S}_b(e) = \begin{cases} (t_h, t_e) & \text{if } t_h < t_e < t_{r_i} \wedge r_j \equiv m_k \wedge \\ & t_h = \frac{t_{m_{k-1}} + t_{m_k}}{2} \\ (0, 0) & \text{otherwise} \end{cases}$$

The Area Between the First and Last Episodes Is A Potential Spoiler Zone



Using Spoiler Areas And A Potential Spoiler Zone, We Can Calculate The Probability Of Spoiler For A Page



$$Pr(\text{spoiler}) = \frac{s}{c}$$

s = # of seconds where we are in a spoiler area
 c = # of seconds between e₁ and e_n

- Background
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Actual Spoiler Areas From Actual Wikis

MEASUREMENTS OF SPOILER PROBABILITY

Sixteen Lucky Fan Wikis Were Selected From wikia.com...

TABLE 9: Fan wikis used in the spoiler areas experiment

Television Show (Network)	Wiki URI .wikia.com	# of Pages	t_{r_1}	t_{e_1}	% of pages in Internet Archive
the Big Bang Theory (CBS)	bigbangtheory	1120	2007-12-14	2007-09-24	68.8%
Boardwalk Empire (HBO)	boardwalkempire	2091	2010-03-18	2010-08-23	80.6%
Breaking Bad (A&E)	breakingbad	998	2009-04-27	2008-01-20	76.0%
Continuum (Showcase)	continuum	258	2012-11-13	2012-05-27	86.8%
Downton Abbey (BBC)	downtonabbey	784	2010-10-04	2010-09-26	53.1%
Game of Thrones (HBO)	gameofthrones	3144	2010-06-24	2011-04-17	75.8%
Grimm (NBC)	grimm	1581	2010-04-14	2011-10-28	57.5%
House of Cards (Netflix)	house-of-cards	251	2013-01-11	2013-02-01	97.2%
How I Met Your Mother (CBS)	how-i-met-your-mother	1709	2008-07-21	2005-09-19	58.7%
Lost (ABC)	lostpedia	18790	2005-09-22	2004-09-22	39.1%
Mad Men (AMC)	madmen	652	2009-07-25	2007-06-03	85.0%
NCIS (CBS)	ncis	5345	2006-09-25	2003-09-23	93.2%
Once Upon A Time (ABC)	onceuponatime	1470	2011-08-09	2011-10-23	79.9%
Scandal (ABC)	scandal	331	2011-06-07	2012-04-05	82.8%
True Blood (HBO)	trueblood	1838	2008-10-06	2008-09-07	74.1%
White Collar (USA)	whitecollar	506	2009-10-30	2009-10-23	79.1%

We See That Not All Pages Are Archived

TABLE 9: Fan wikis used in the spoiler areas experiment

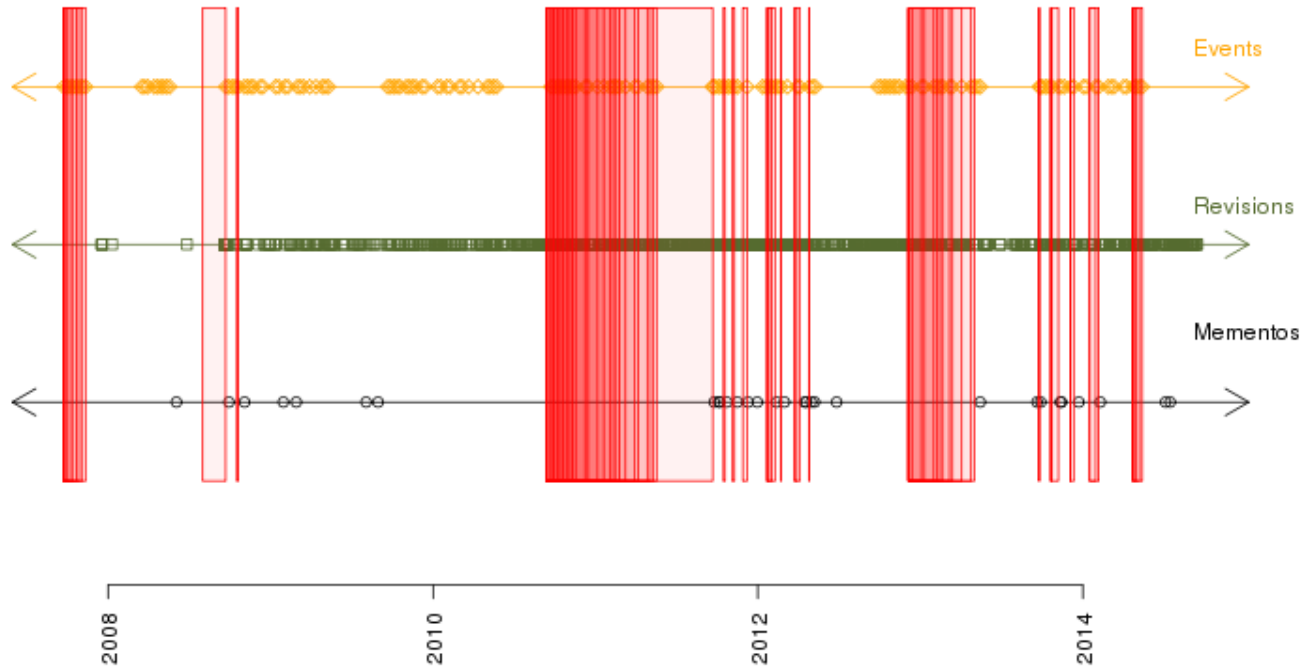
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White Collar (USA)	whitecollar	506	2009-10-30	2009-10-23	79.1%

None of these are 100%

In fact, 38% of the total is not available in the Internet Archive.

Spoiler Areas Do Exist!

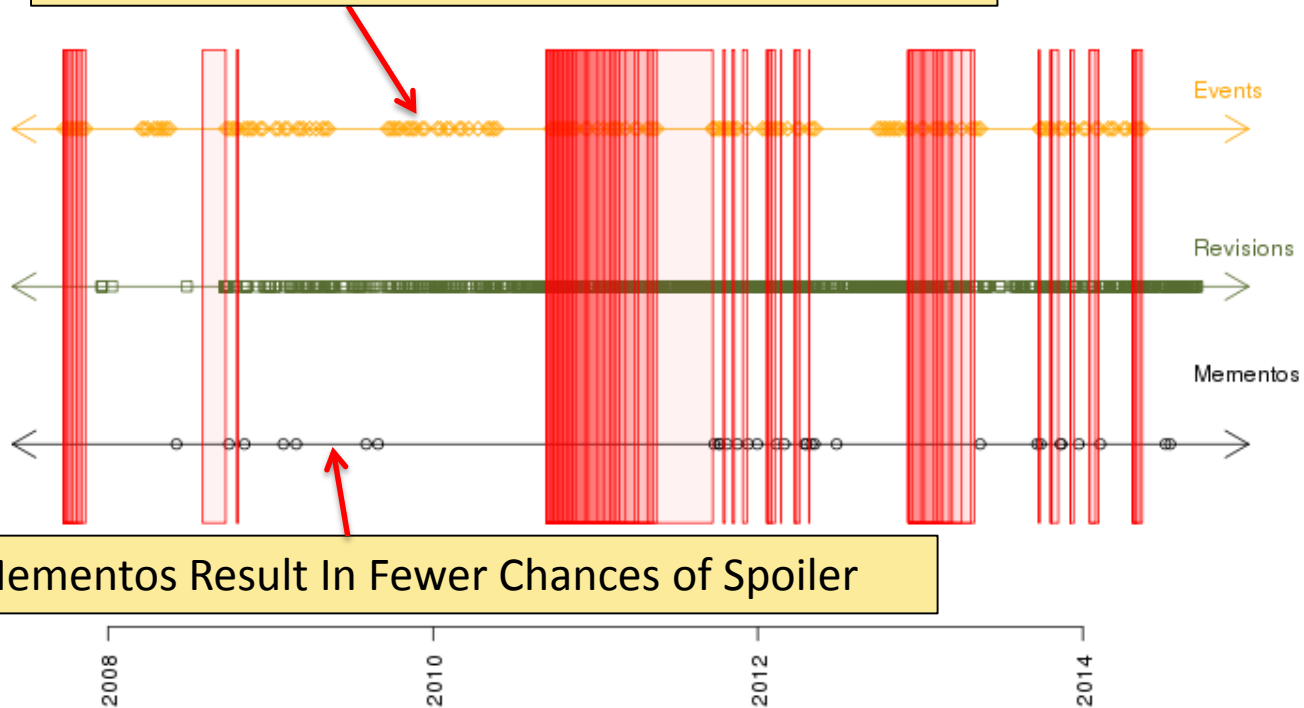
Spoiler Areas for http://bigbangtheory.wikia.com/wiki/Sheldon_Cooper



Spoiler Areas Do Exist!

Spoiler Areas for http://bigbangtheory.wikia.com/wiki/Sheldon_Cooper

One Can See Whole Seasons Clumped Together



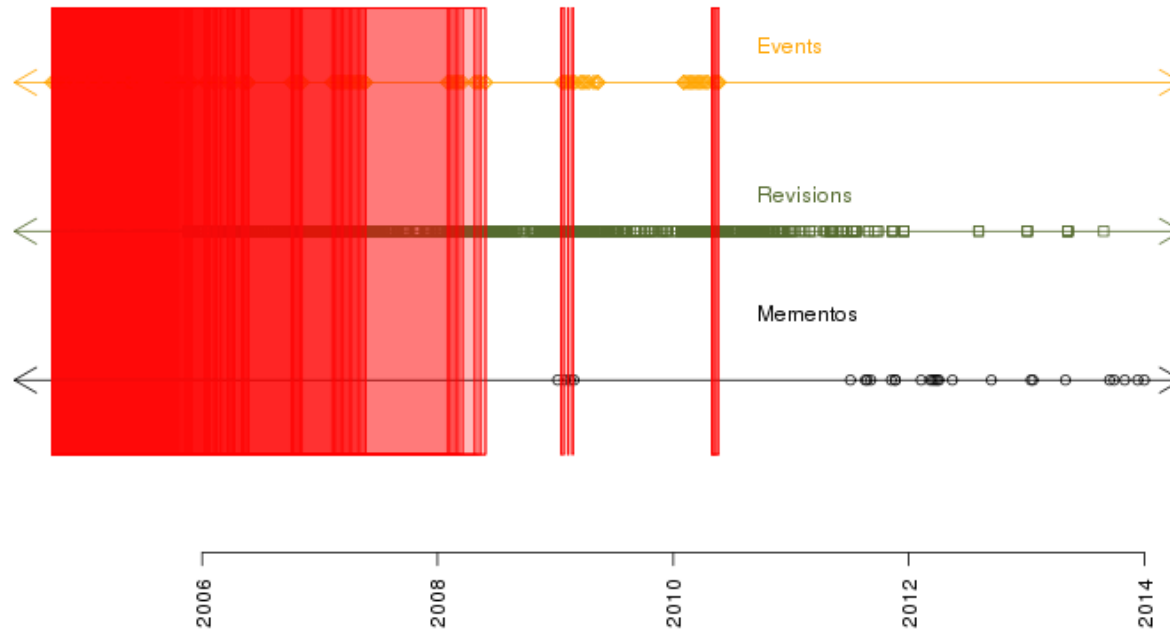
Fewer Mementos Result In Fewer Chances of Spoiler

We Discovered Different Categories of Pages

- Normal
- Wiki-Before-Show
- Season-In-A-Day

Normal Pages Are Started After The Series Starts

Spoiler Areas for http://lostpedia.wikia.com/wiki/Kate_Austen

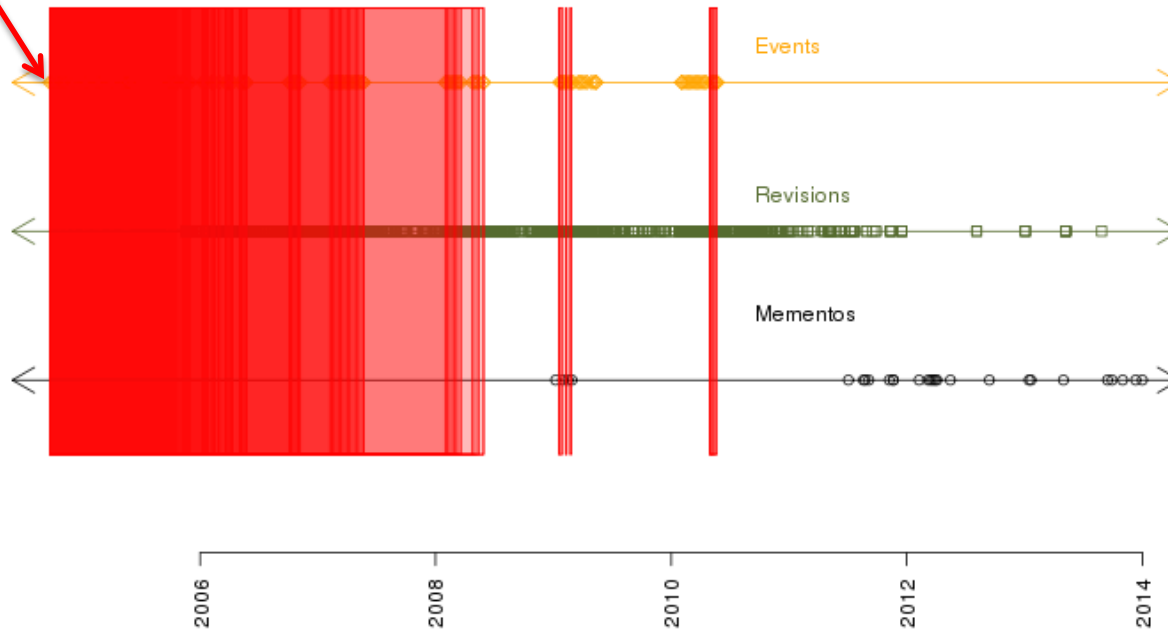


Normal Pages

Are Started After The Series Starts

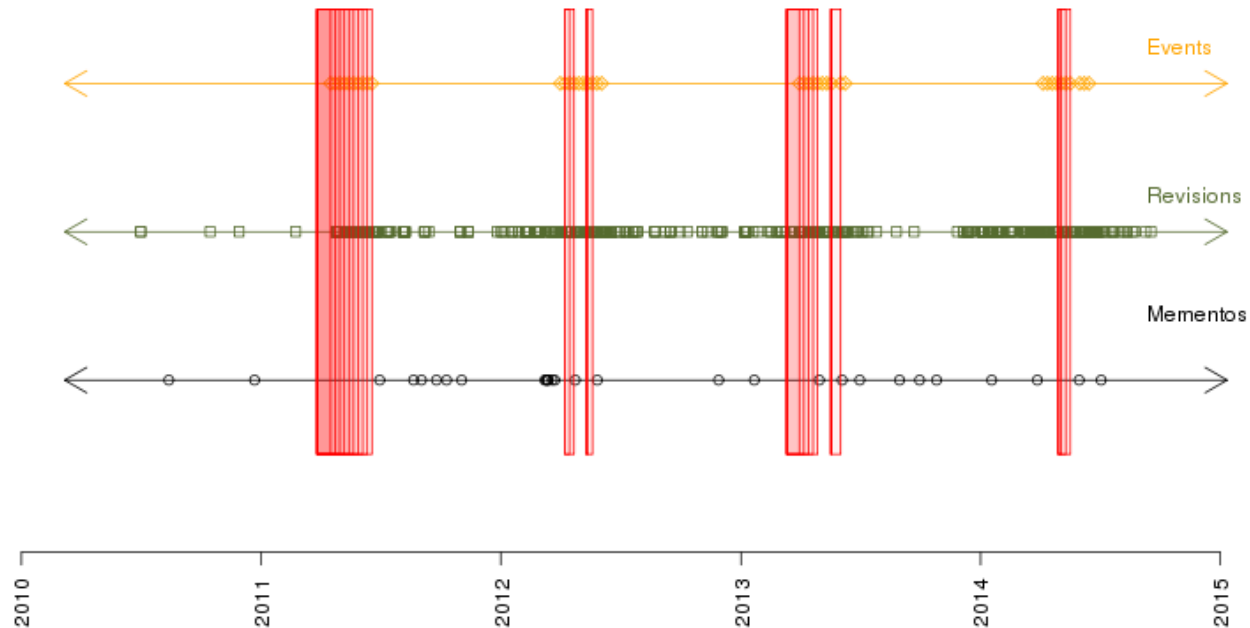
Spoiler Areas for http://lostpedia.wikia.com/wiki/Kate_Austen

Pre-Archive
Spoiler Areas
Begin At First
Episode



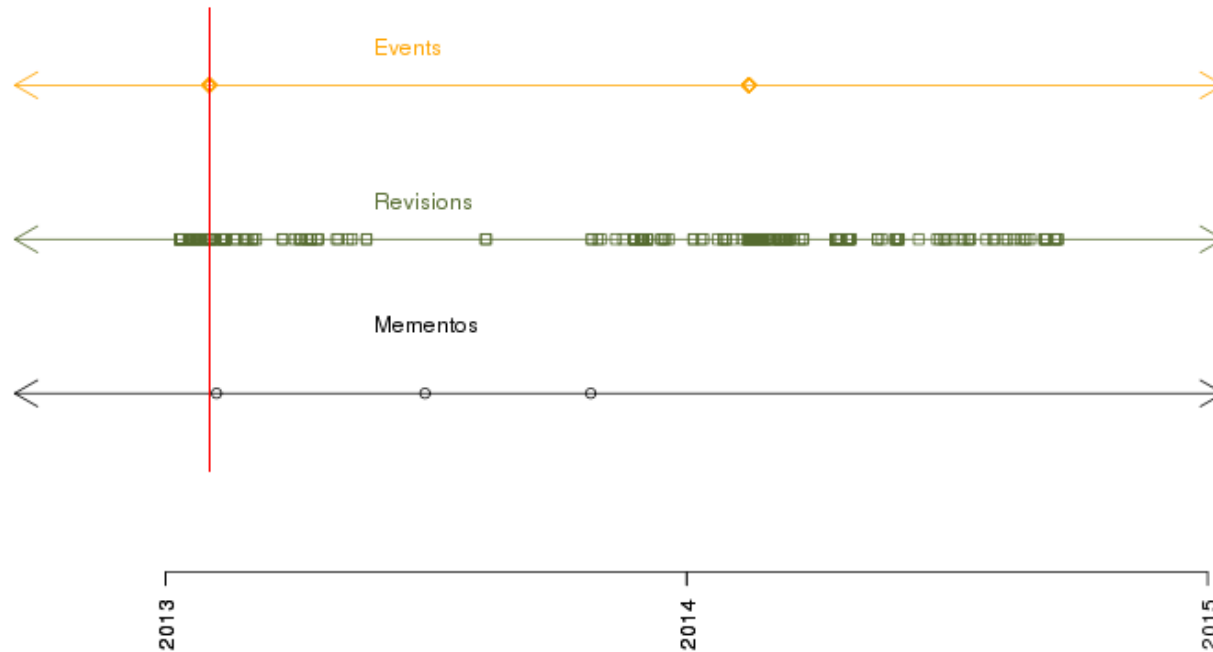
Wiki-Before-Show Pages Are Started Prior To The First Episode

Spoiler Areas for http://gameofthrones.wikia.com/wiki/Daenerys_Targaryen



Season-in-a-Day Pages Have Many Episodes In A Single Day

Spoiler Areas for http://house-of-cards.wikia.com/wiki/Frank_Underwood



For *Normal* Pages, We See A Variety of Probabilities

TABLE 11: Spoiler probabilities for most popular pages within each fan wiki

Wiki	Page Name	Probability of Spoiler	# of Spoiler Areas	# of Revisions	# of Mementos
bigbangtheory	Sheldon Cooper	0.31	69	1958	30
boardwalkempire	Nucky Thompson	0.15	31	290	15
breakingbad	Walter White	0.43	40	882	20
continuum	Keira Cameron	0.54	21	104	5
downtonabbey	Sybil Branson	0.42	23	580	3
gameofthrones	Daenerys Targaryen	0.16	24	768	29
grimm	Nick Burkhardt	0.39	30	795	5
house-of-cards	Frank Underwood	0.0	13	380	3
how-i-met-your-mother	Barney Stinson	0.55	120	588	13
lostopedia	Kate Austen	0.67	94	3531	27
madmen	Mad Men Wiki	0.22	36	250	85
ncis	Abigail Sciuto	0.67	182	404	11
onceuponatime	Emma Swan	0.36	34	1210	11
scandal	Main Page	0.60	31	250	14
trueblood	Eric Northman	0.28	47	931	14
whitecollar	Neal Caffrey	0.29	38	199	8

For *Wiki-Before-Show* Pages, We Also See A Variety of Probabilities

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Our Model Breaks Down For *Season-In-A-Day*

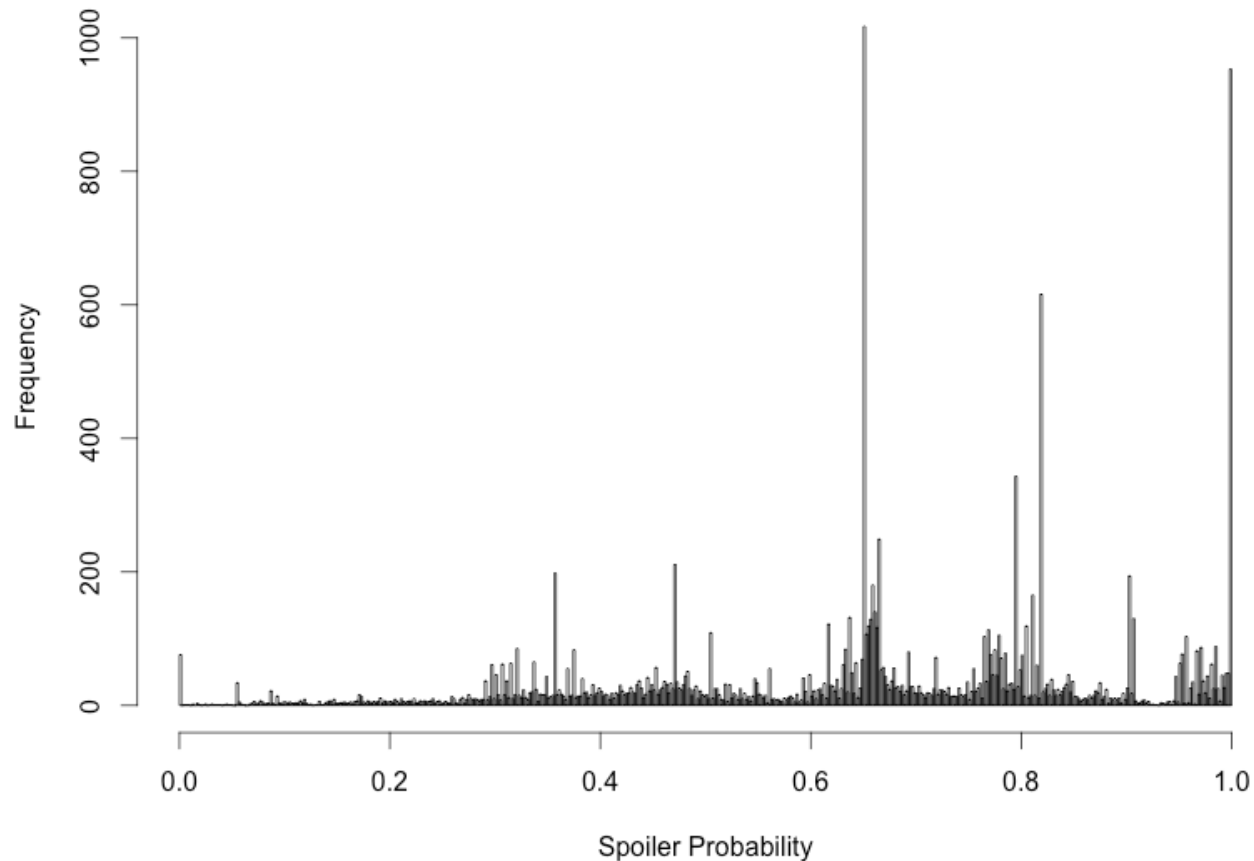
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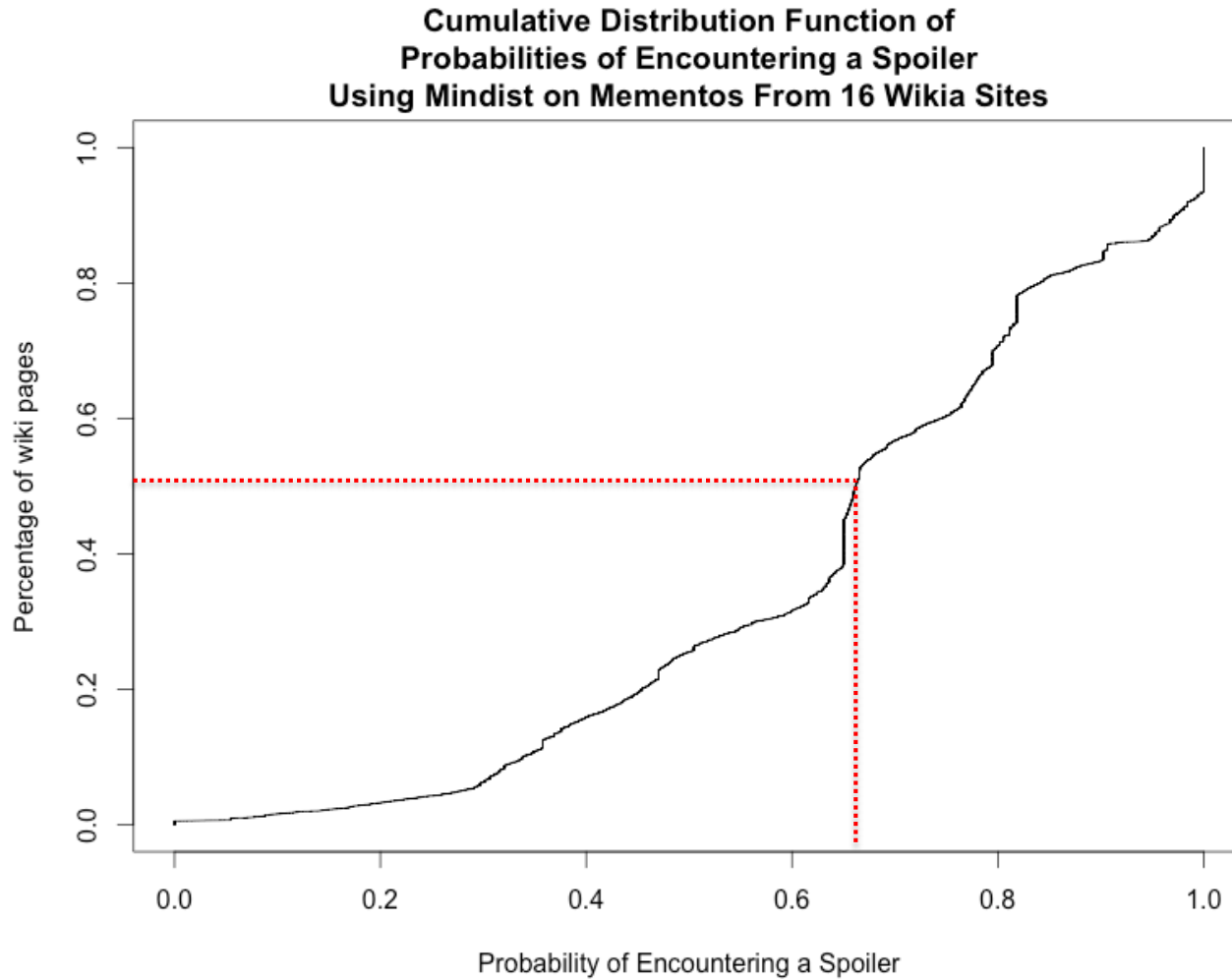
13 spoiler areas exist for this page, but they all have length 0

The Probabilities Do Not Follow A Known Distribution

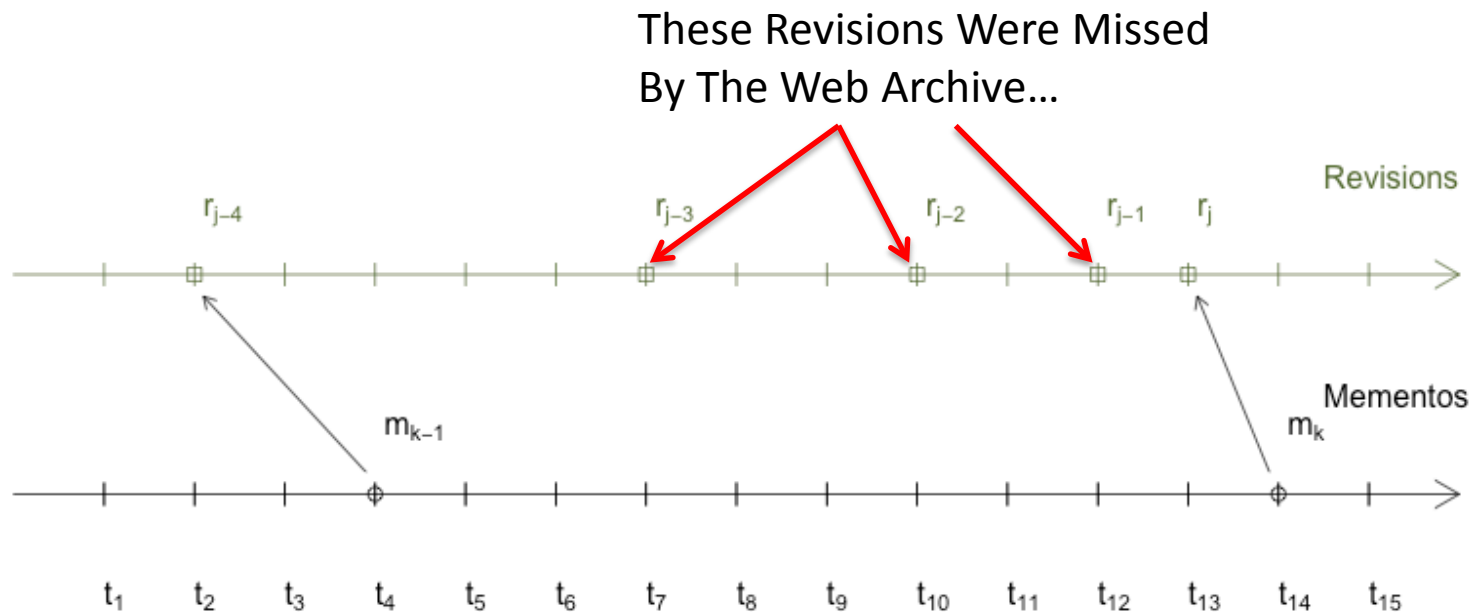
Histogram of Overall Spoiler Probabilities from 16 Wikia Sites



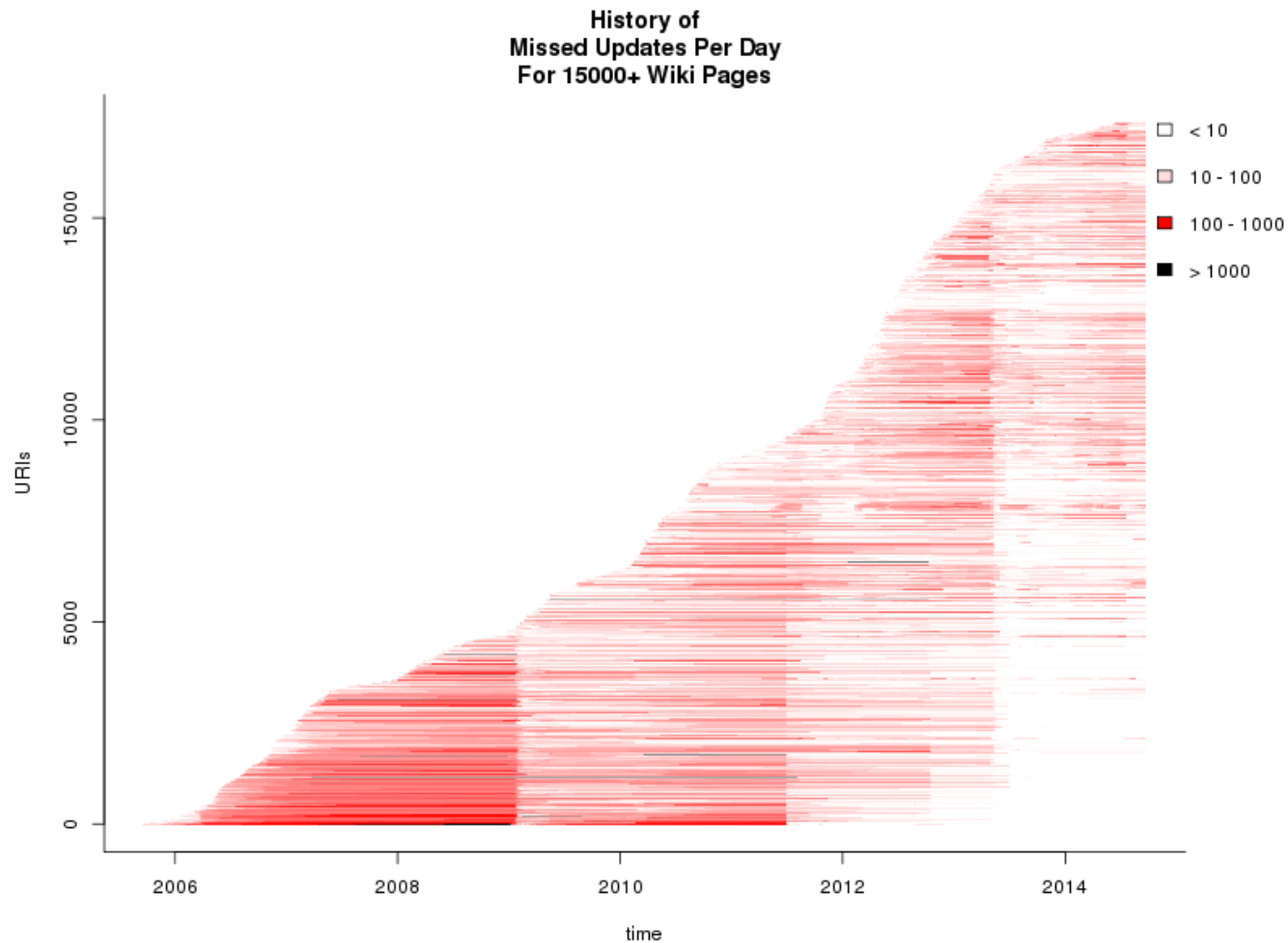
50% Of The Pages Have A Spoiler Probability < 0.66



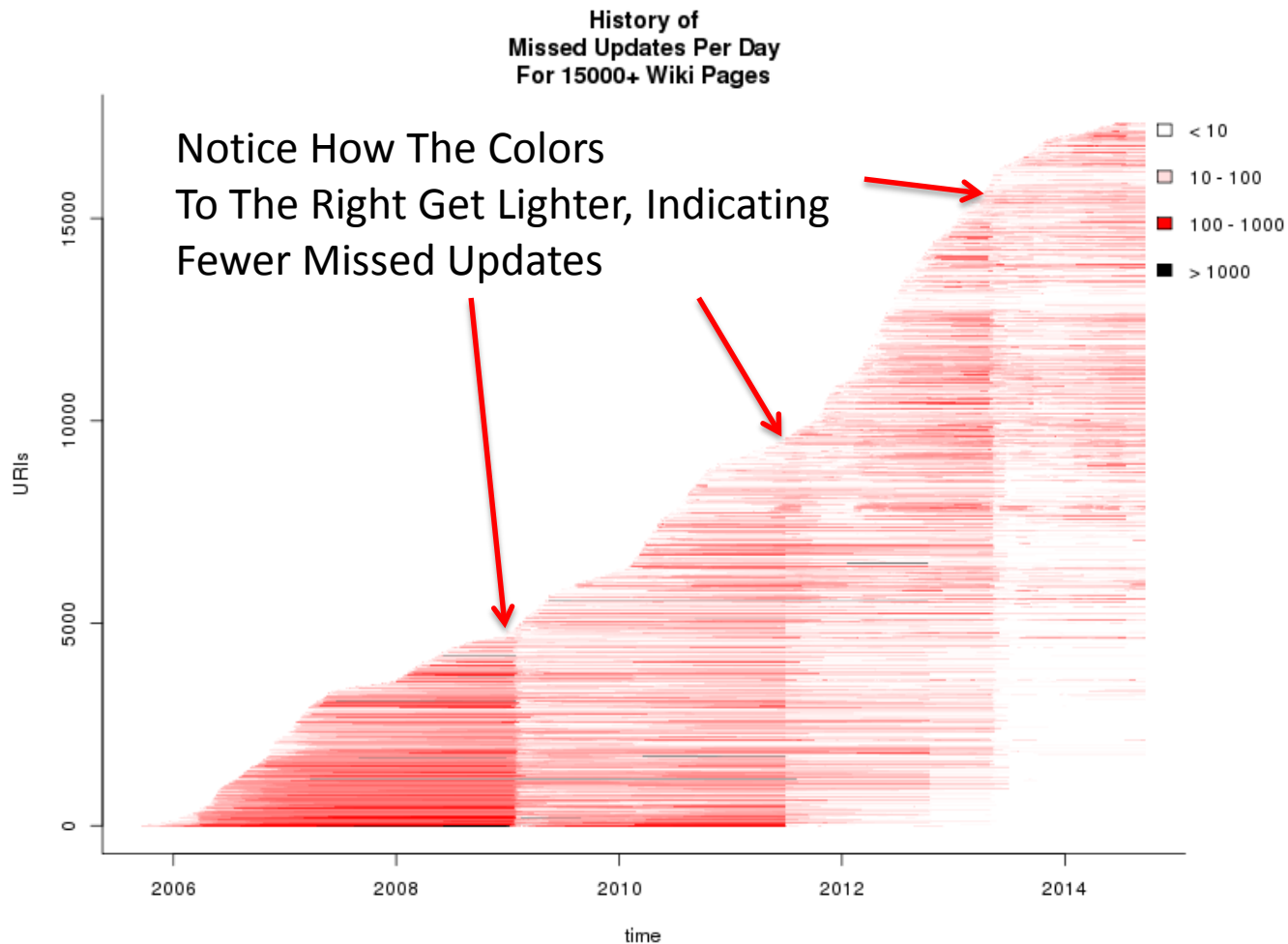
Remember Missed Updates?



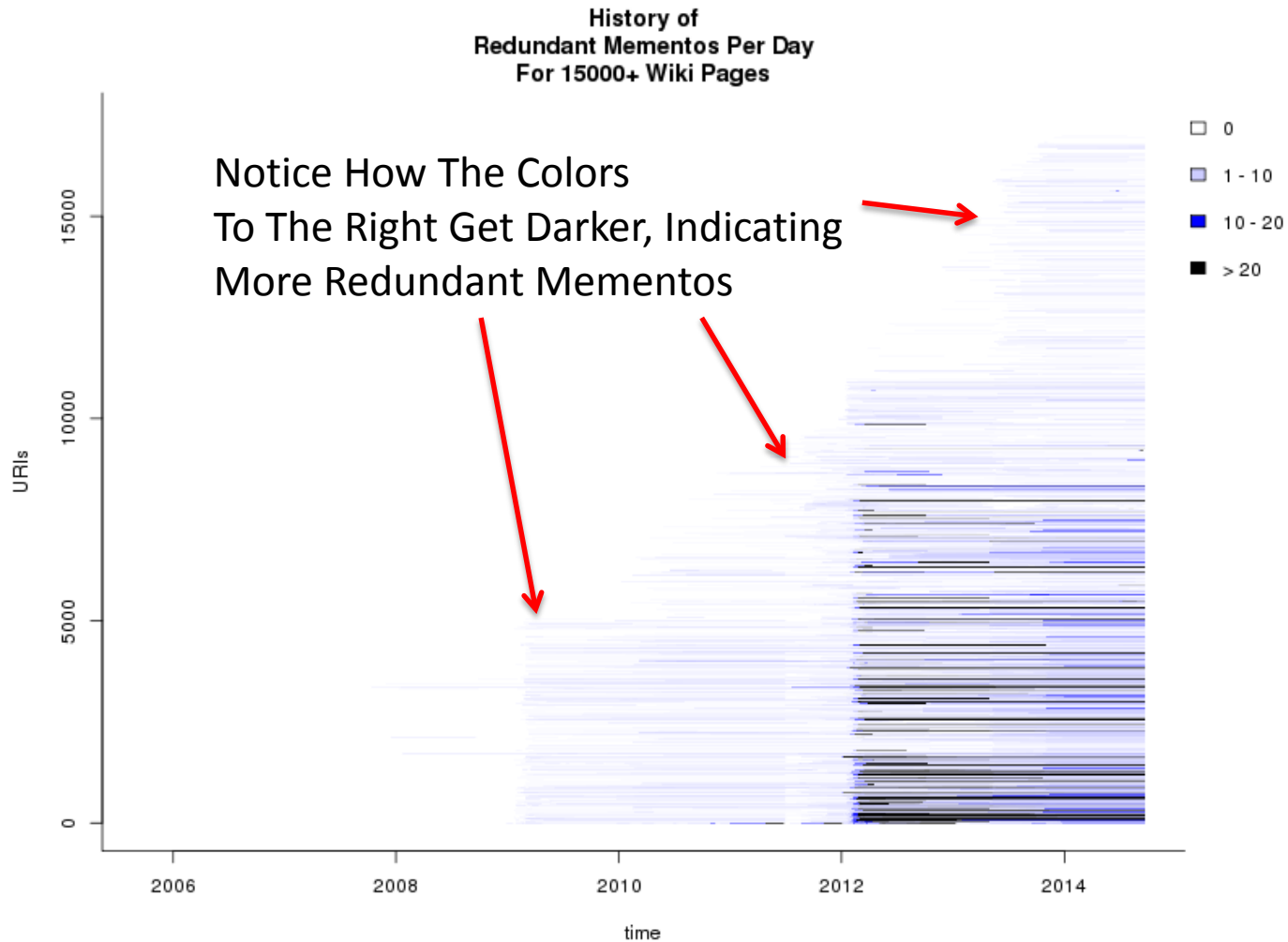
We Had An Opportunity To Measure Missed Updates



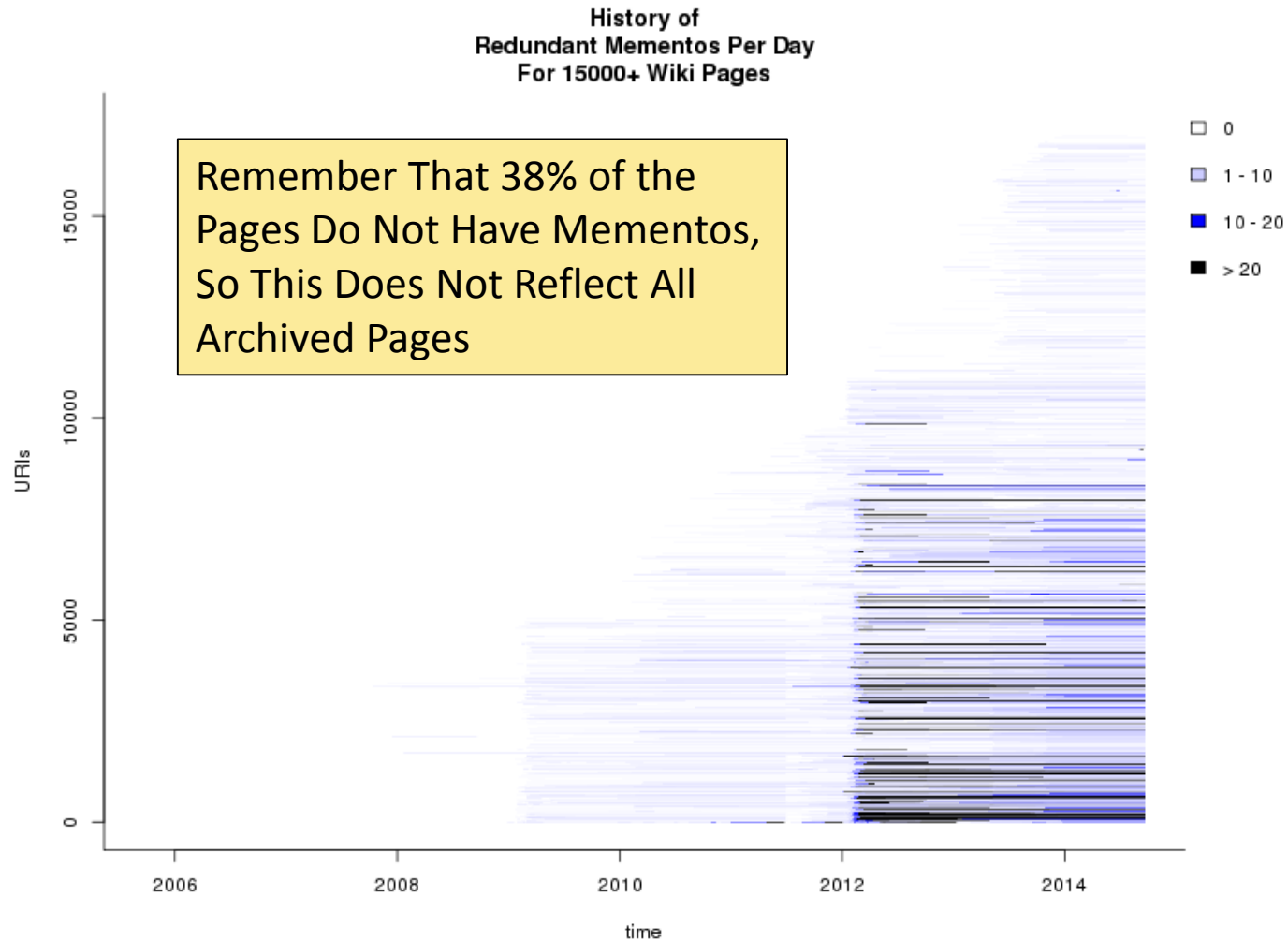
We See Lines Where The Archive Adopts A More Aggressive Policy



Looking At Redundant Mementos, We See The Opposite Effect



Looking At Redundant Mementos, We See The Opposite Effect



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The Wayback Machine Uses mindist, Ergo Users Encounter Spoilers There...

SPOILERS IN THE WAYBACK MACHINE

We Have Access To Some Anonymized Logs From The Wayback Machine

```
1 0.247.222.86 - - [02/Feb/2012:07:03:55 +0000] "GET
  http://web.archive.org/web/20020404020224/http://www.example.com/page1.html HTTP
  /1.1" 200 18875 "
  http://wayback.archive.org/web/*/http://www.example.com/page1.html" "Mozilla/5.0 (
  Macintosh; Intel Mac OS X 10_6_8) AppleWebKit/535.7 (KHTML, like Gecko) Chrome
  /16.0.912.77 Safari/535.7" )
2 0.247.222.86 - - [02/Feb/2012:07:10:02 +0000] "GET
  http://web.archive.org/web/20020405015622/http://www.example.com/page2.html HTTP
  /1.1" 200 18875 "
  http://wayback.archive.org/web/20020404020224/http://www.example.com/page1.html" "
  Mozilla/5.0 (Macintosh; Intel Mac OS X 10_6_8) AppleWebKit/535.7 (KHTML, like
  Gecko) Chrome/16.0.912.77 Safari/535.7" )
```

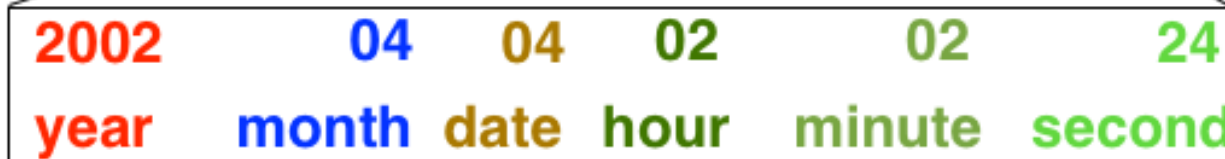
From these logs, we have:

- which memento the user came from (the referer)
- the memento returned to the user

The Wayback Machine Rewrites URIs, Redirecting Users When They Click On Links To Other Pages That Exist During The Same Time Period.

We Can Infer Desired Datetime And Have The Memento-datetime

<http://web.archive.org/web/20020404020224/http://www.example.com>



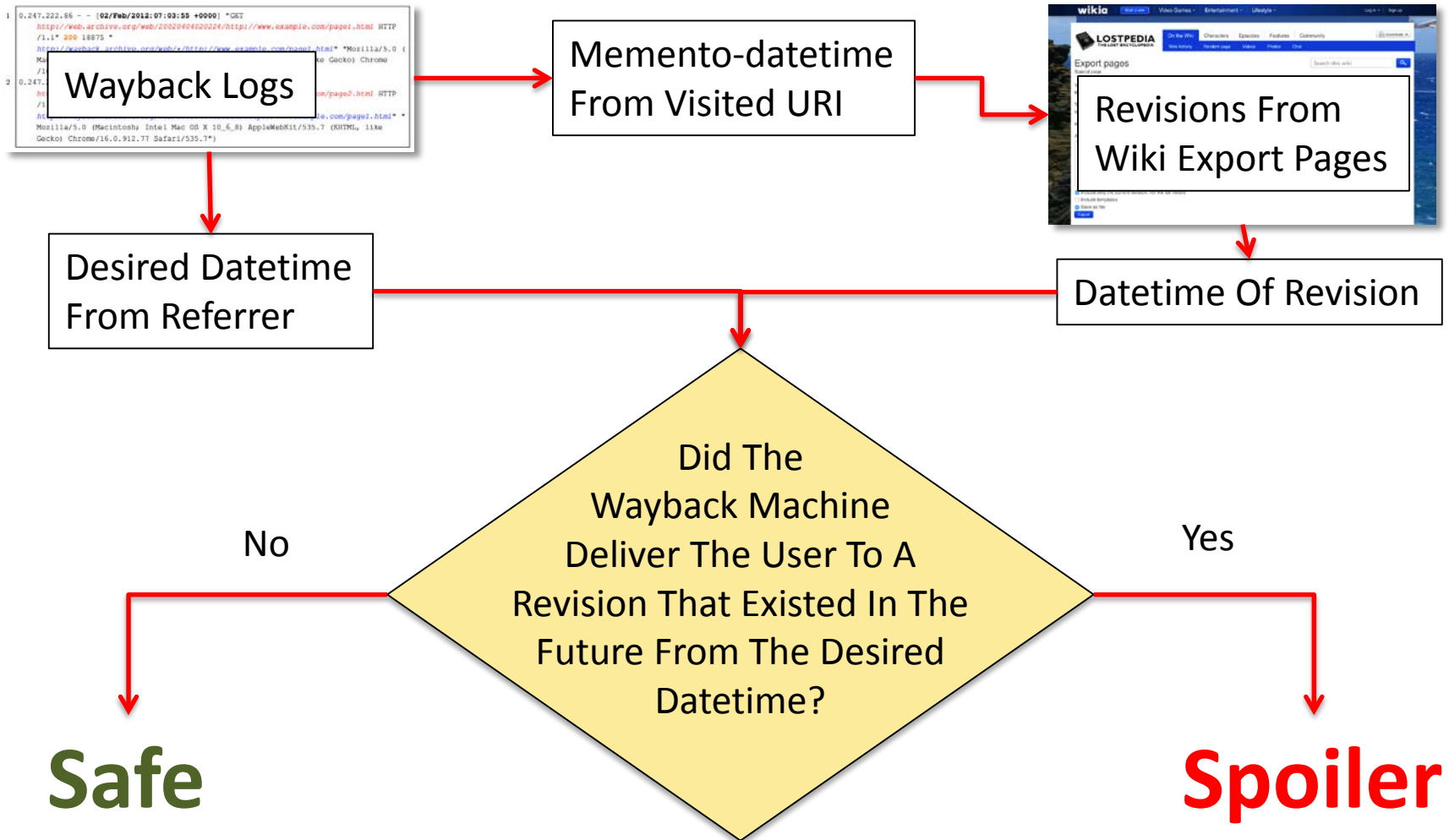
Memento from archive.org for URI-R

***http://www.example.com* on **April 4, 2002** at **2:02:24** AM GMT**

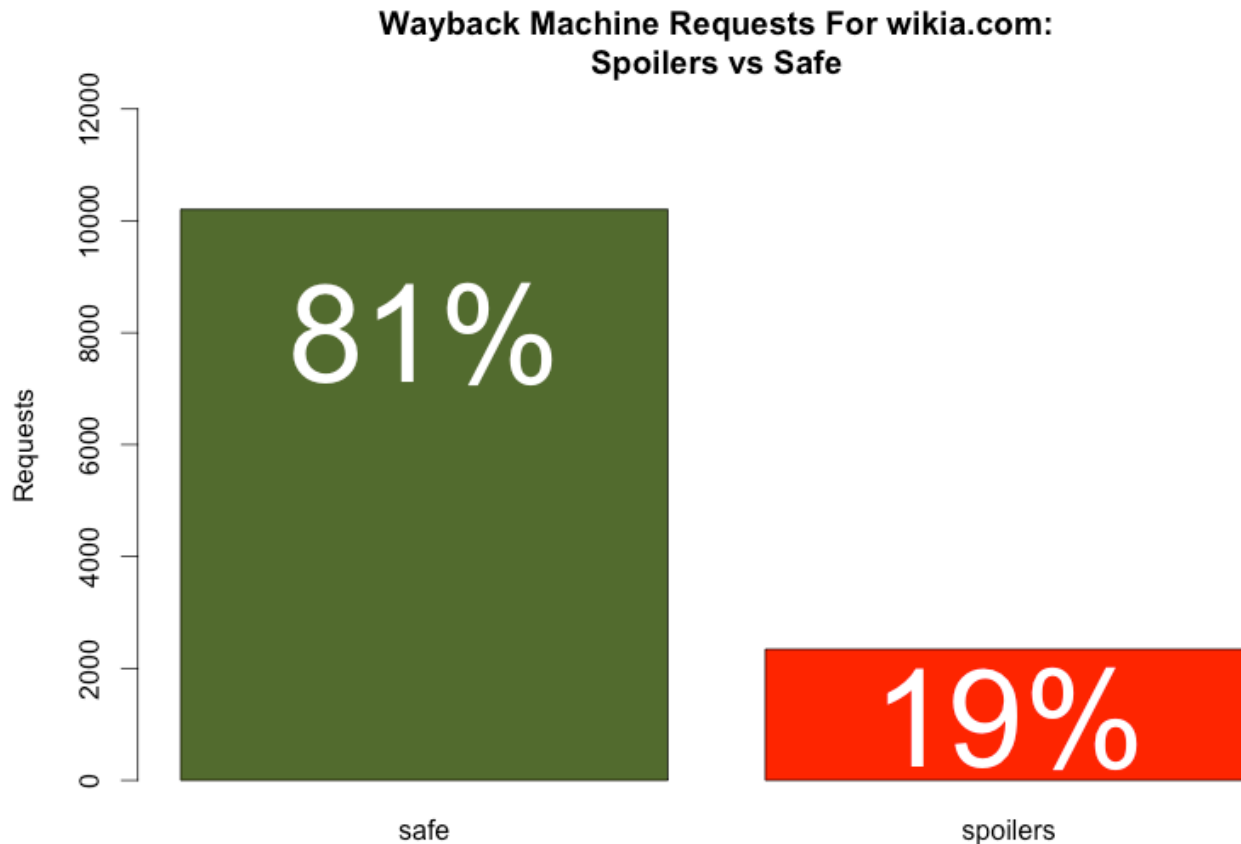
From the referrer, we can *infer* their desired datetime

From the memento returned to the user, we can acquire the Memento-Datetime

Using the Logs, We Can See How Many wikia.com Requests End In Spoilers



Wayback Machine Log Results For wikia.com Requests



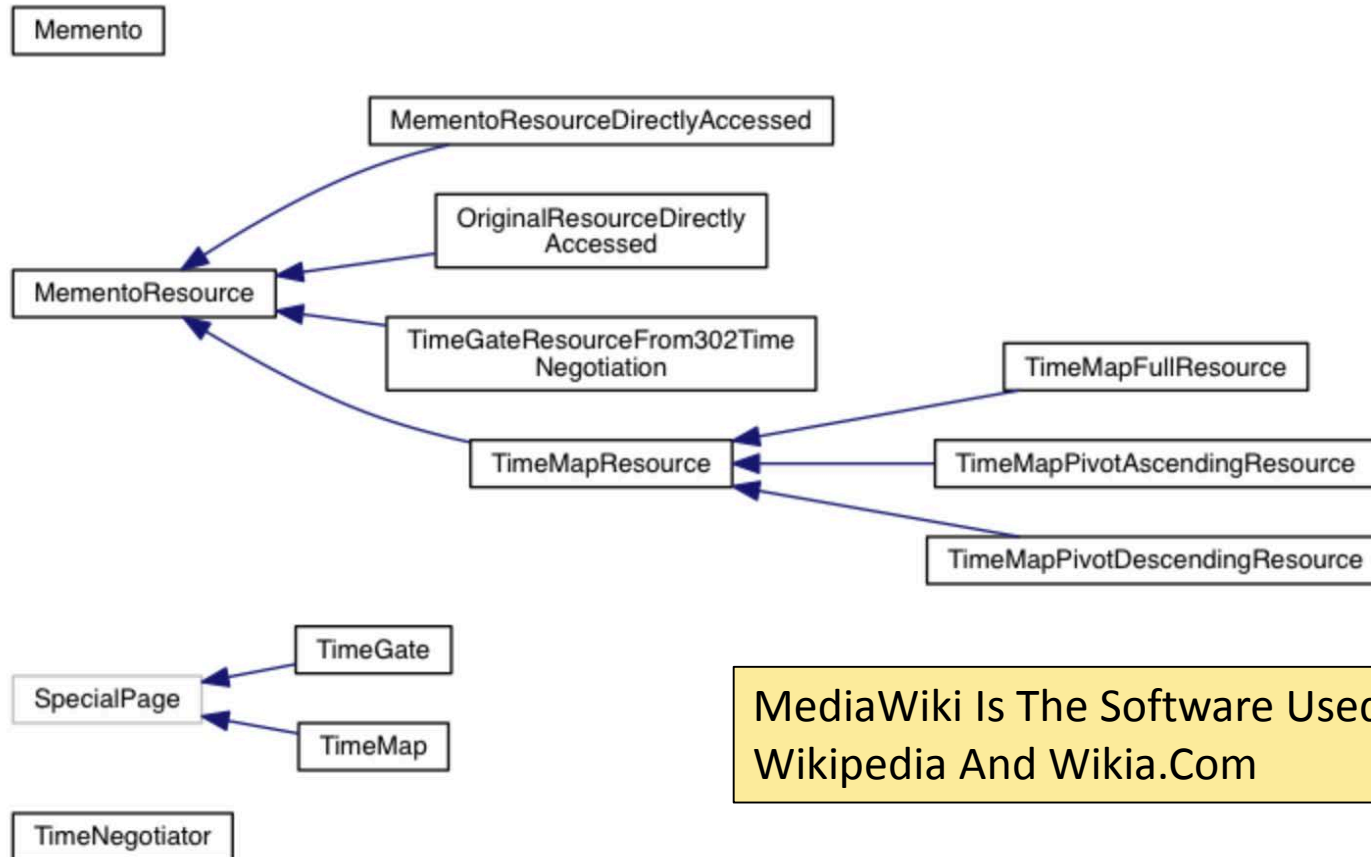
We Have No Way To Identify Wikis Other Than By Domain Name,
Data Does Not Include All Wikis...

- Background
- Related Work
- TimeGate Heuristics
- Theory of Spoiler Probability
- Measurements of Spoiler Probability
- Spoilers In The Wayback Machine
- The Memento MediaWiki Extension
- Future Work
- Conclusions

A Solution For Avoiding Spoilers In Wikis. Wiki Revisions Are Mementos, Too!

THE MEMENTO MEDIAWIKI EXTENSION

We Developed The Memento MediaWiki Extension To Use minpast



MediaWiki Is The Software Used By Wikipedia And Wikia.Com

<http://www.mediawiki.org/wiki/Extension:Memento>

We Set Up A Demonstration Wiki...

http://ws-dl-05.cs.odu.edu/demo/index.php/Main_Page

The screenshot shows a MediaWiki page for Tyrion Lannister. The page layout includes a navigation sidebar on the left with links like 'Main page', 'Community portal', and 'Recent changes'. The main content area features a 'Feature article' section with a portrait of Tyrion Lannister and a detailed text description of his character. Below this is a 'Feature quote' section with three quotes from the character. On the right side, there is a 'About the Wiki' section and a 'Ten sister Wikis in Other Languages' section. The page also has a search bar and a 'Log in' button at the top right.

Navigation

- Main page
- Community portal
- Current events
- Recent changes
- Random page
- Help

Toolbox

- What links here
- Related changes
- Special pages
- Printable version
- Permanent link
- Page information

Page Discussion Read View source View history Search Go Search

To experience Memento using this Wiki, you will also need the Memento Time Travel extension for Google Chrome, available at <http://bit.ly/memento-for-chrome>.


This is a demonstration wiki. All content on this site is for educational research purposes only.

The content is used pursuant to its license at [Creative Commons](http://creativecommons.org/licenses/by-sa/4.0/).

The original site is at <http://awoiaf.westeros.org/>

Issues may exist with content on some pages due to import problems.

Feature article



Tyrion Lannister is the third and youngest child of Lord Tywin Lannister of Casterly Rock and his wife Lady Joanna. Tyrion is an ugly and misshapen dwarf, and because of this he is sometimes mockingly called the Imp and the Halfman. Despite his deformation and the social stigma that comes with it, Tyrion's wit and intelligence prove to be great assets to the Lannister cause. However, a difficult relationship with his father, as well as with his sister *Queen Cersei*, prove central obstacles to him and his ambitions. Thanks to the *War of the Five Kings*, Tyrion rises high, acting as *Hand of the King* to King Joffrey, but he reaches his zenith at the *Battle of the Blackwater* where he suffers a nearly mortal wound that leaves him disfigured and pushed out of power.

Tyrion is one of the most distinctive and predominant POVs in the series, often cited by *George R.R. Martin* as his favorite character. *Read more*

[More featured articles...](#)

Feature quote

- "There are no men like me. There's only me." – Jaime Lannister^[1]
- "Those are brave men. Let's go kill them." – Tyrion Lannister^[2]
- "In the dark, I am the Knight of Flowers." – Tyrion Lannister to Sansa Stark, on the night of their marriage^[3]

[More quotes...](#)

About the Wiki

Wiki of Ice and Fire is fan-created for *George R. R. Martin's A Song of Ice and Fire* and HBO's *Game of Thrones*.

We are part of the information about A Song of Ice and Fire provided by *westeros.org* which provides the web space and technical support

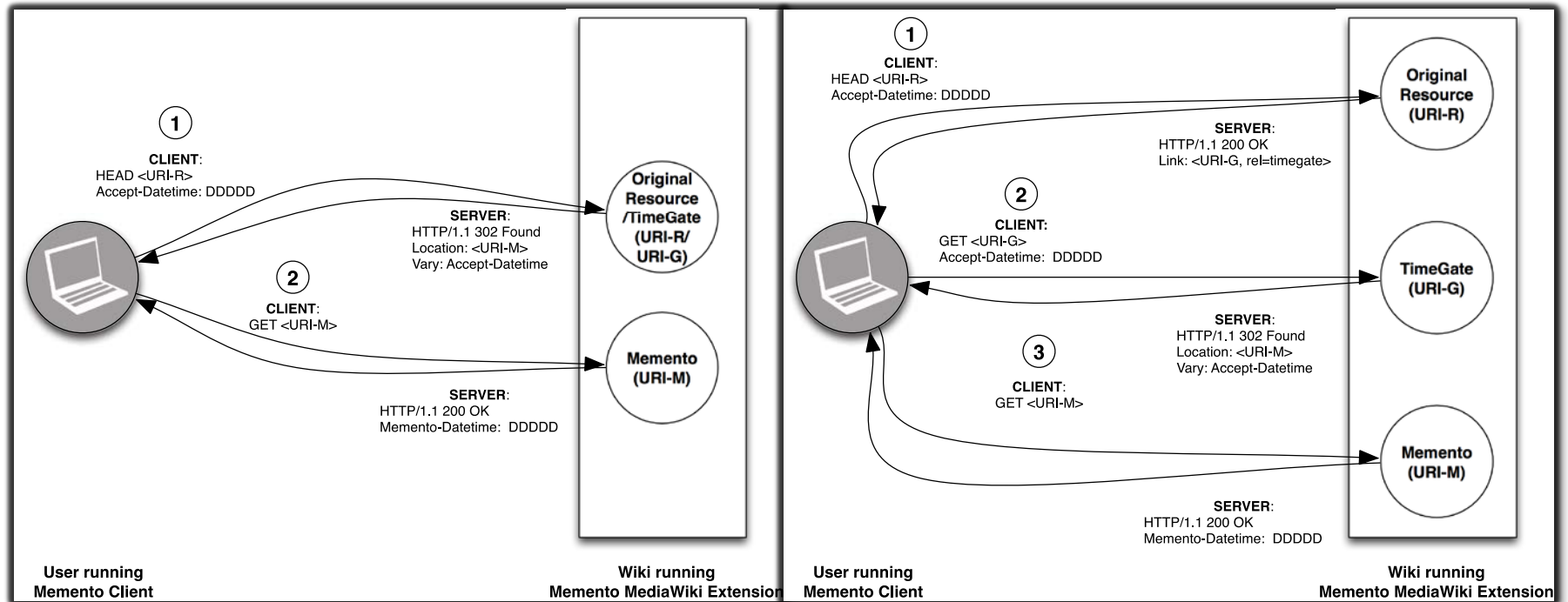
We currently have 4 articles.

Ten sister Wikis in Other Languages

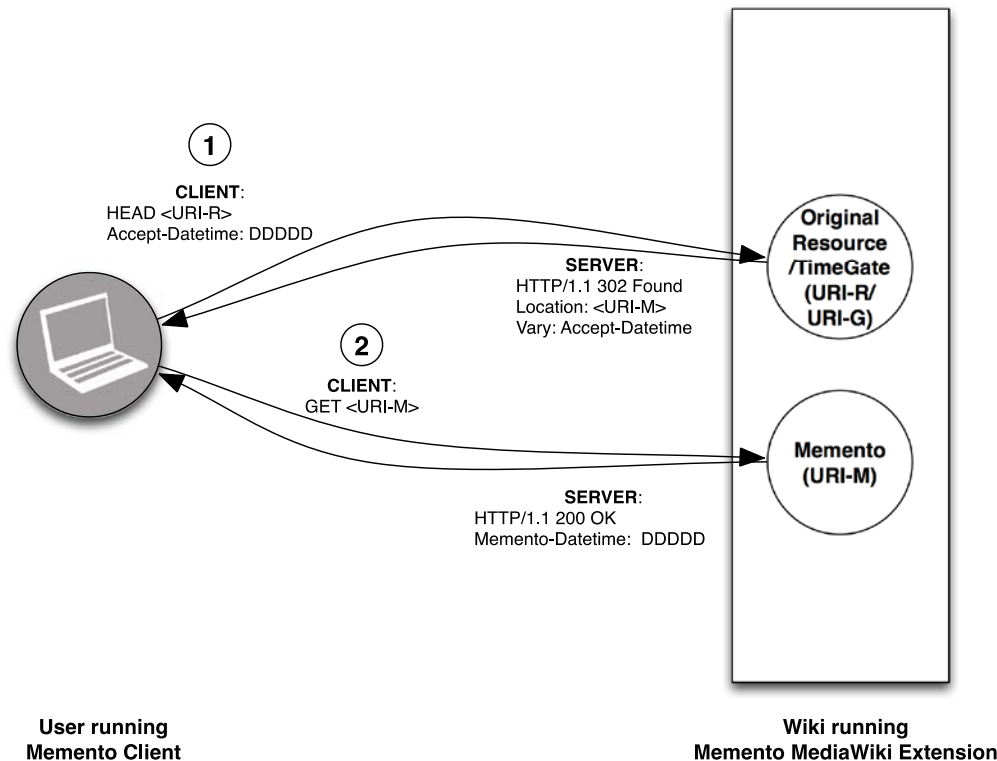
- The French wiki [La Garde de Nuit](#)
- The Russian wiki [Энциклопедия Песни Льда и Пламени](#)
- The Chinese wiki [冰与火之歌中文维基](#)

Data was exported from: <http://awoiaf.westeros.org>

For Performance, We Had An Opportunity To Experiment With Alternate Memento Patterns

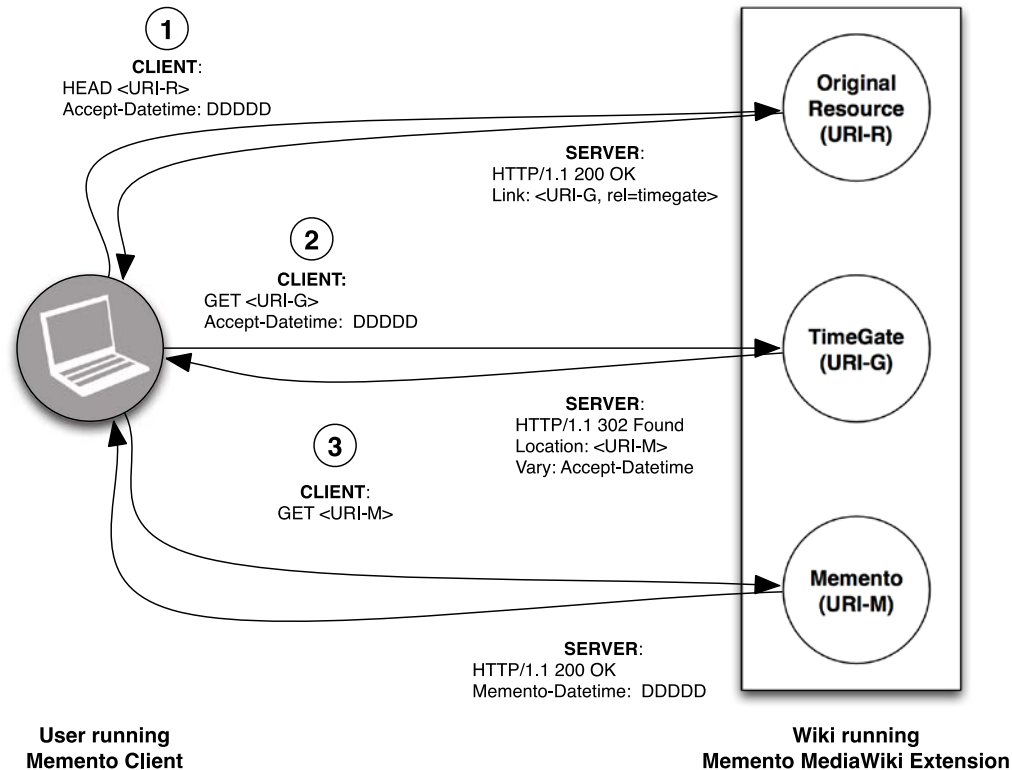


Original Resource Acts As Own TimeGate (Pattern 1.1)



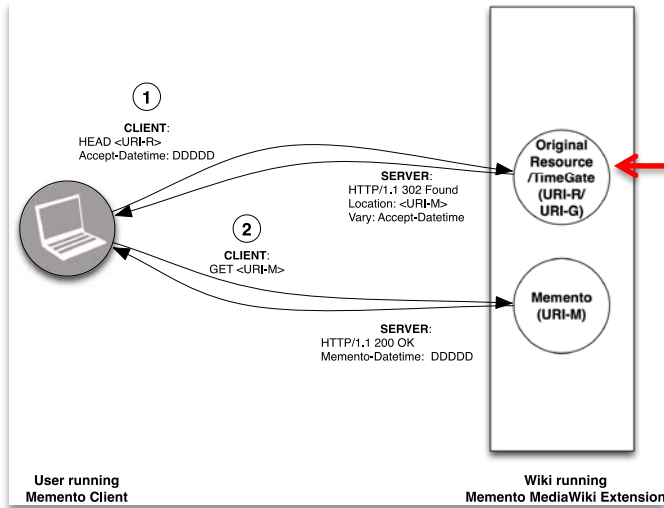
This Pattern Only Requires 2 Requests To Acquire A Memento. Intuitively, It Should Perform Better.

Client Must Ask About TimeGate (Pattern 2.1)



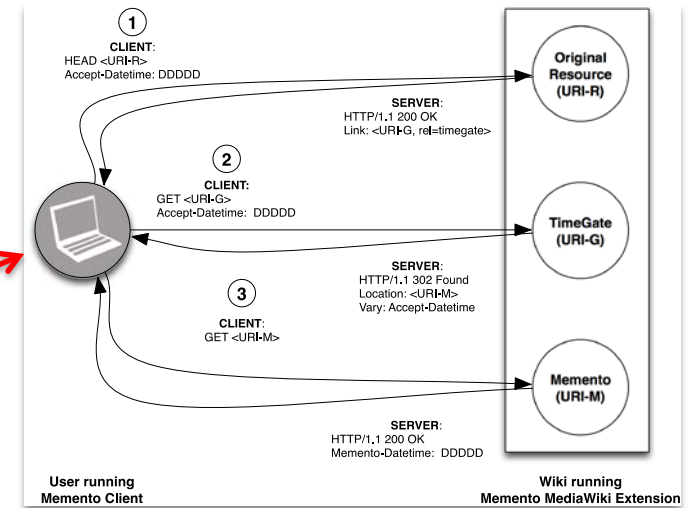
This Pattern Requires 3 Requests To Acquire A Memento.
Intuitively, It Should Perform Worse.

Using Analysis and Experimentation We Found That The Three-Request Pattern Actually Performed Better

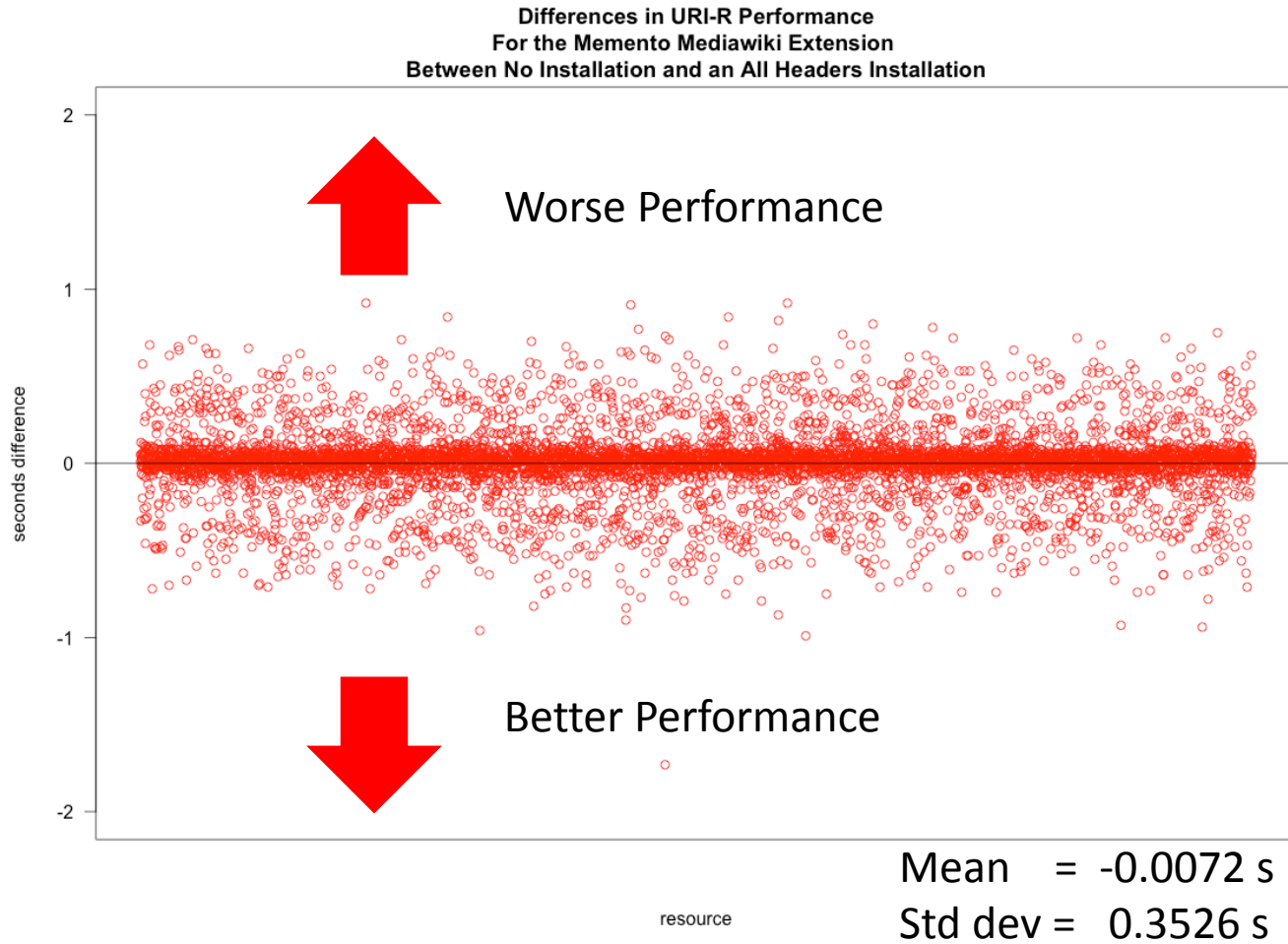


Mediawiki Takes Too Long To Generate A TimeGate Response If The Two Are The Same Page.

The Three-request Pattern Requires An Extra Request, But, Due To Round-trip Time, It Performs Better Unless The User Has A Bandwidth Of 21,926 bps Or Less.

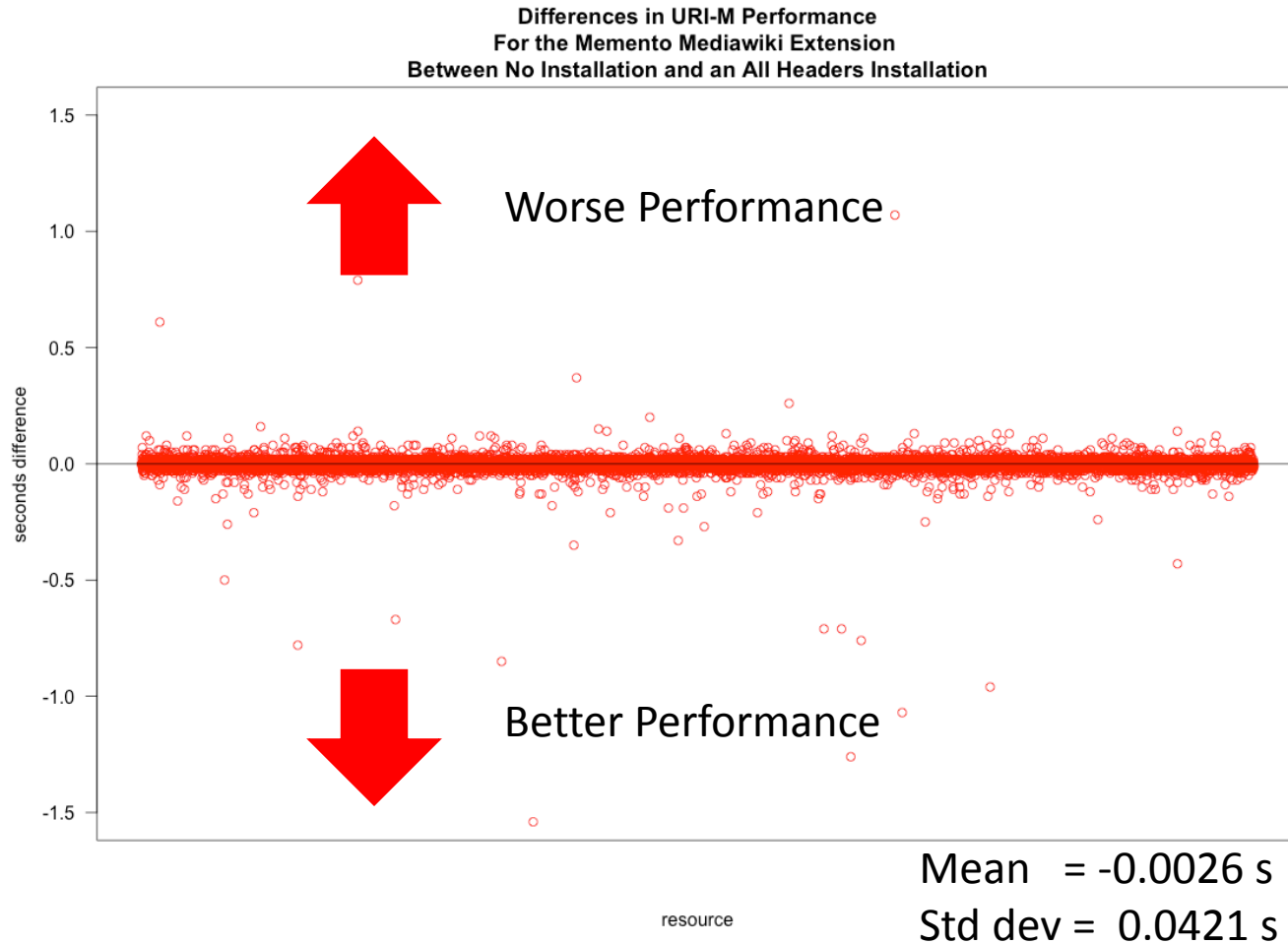


Serving Current Pages Takes The Same Time With Or Without The Extension



We used seige for testing, as detailed in <http://arxiv.org/abs/1406.3876>

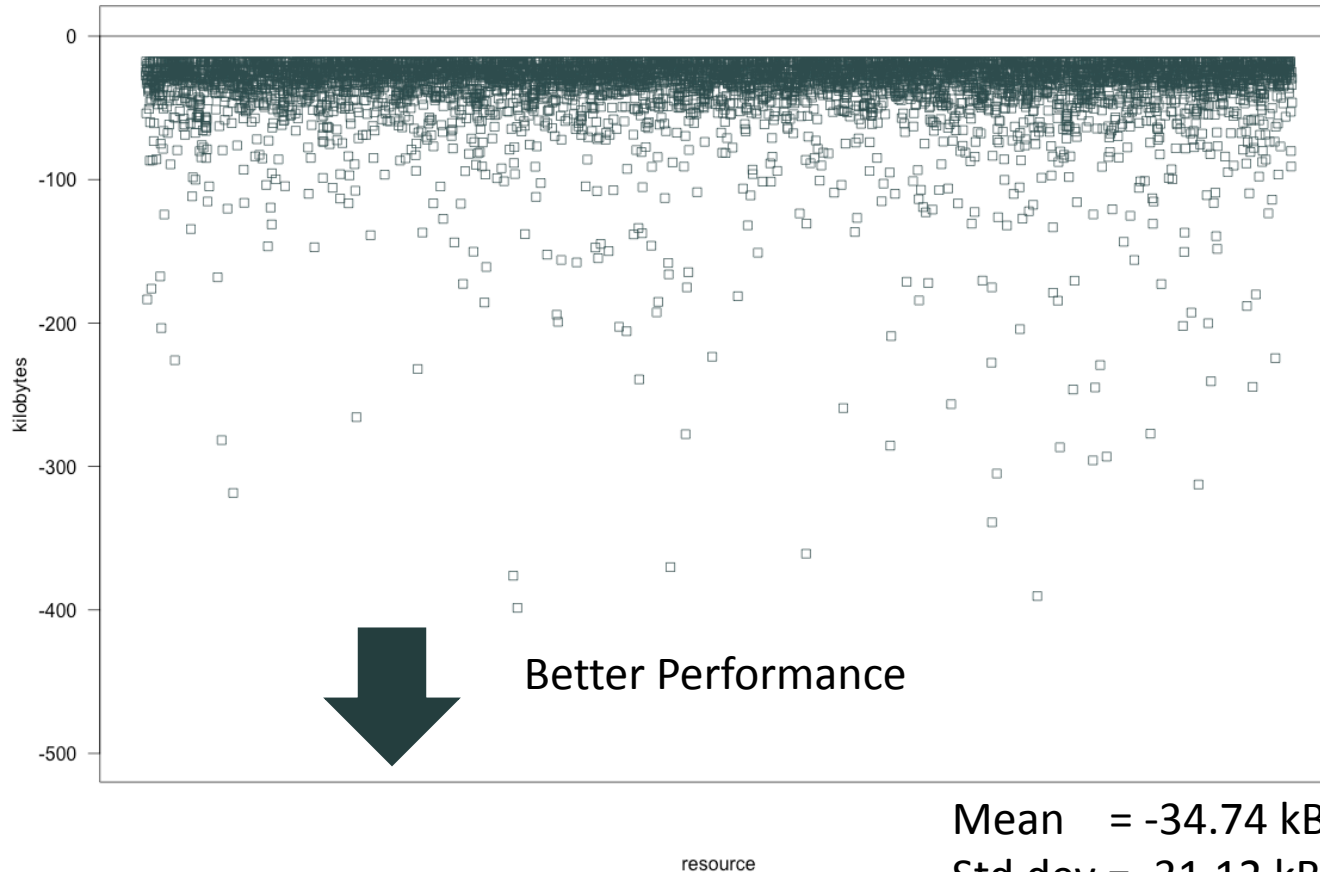
Serving Old Pages (Mementos) Takes The Same Time With Or Without The Extension



We used seige for testing, as detailed in <http://arxiv.org/abs/1406.3876>

TimeMaps Are Smaller Than Wiki History Pages, So They Perform Better

Differences in size between Memento MediaWiki Extension TimeMaps and MediaWiki History Pages



We used seige for testing, as detailed in <http://arxiv.org/abs/1406.3876>

MediaWiki Does Not Just Store Previous Revisions Of Pages...

Images, Stylesheets, and JavaScript have previous revisions stored as well

MediaWiki:Common.css: Revision history

View logs for this page

Browse history

From year (and earlier): 2014 From month (and earlier): all Tag filter:

Go

MediaWiki:Common.js: Revision history

View logs for this page

Browse history

From year (and earlier): 2014 From month (and earlier): all Tag filter:

Go

File history

Click on a date/time to view the file as it appeared at that time.

(newest | oldest) View (newer 50 | older 50) (20 | 50 | 100 | 250 | 500)







current	Date/Time	Thumbnail	Dimensions	User	Comment
	21:48, 22 March 2014		959 × 593 (105 KB)	Bigdaddybrabantio	Michigan: https://twitter.com/API/status/44747566558963504, http://www.detroitnews.com/article/20140322/METHOD/903220039
	21:46, 22 March 2014		959 × 593 (105 KB)	Dralwik	Roll back Michigan
	15:55, 22 March 2014		959 × 593 (104 KB)	Dralwik	Implement beige stripes per en:File talk:Samsex marriage in USA.svg Proposal 3 (Change black to beige gold)
	21:37, 21 March 2014		959 × 593 (104 KB)	Dralwik	Michigan struck down, no stay yet
	01:03, 20 March 2014		959 × 593 (105 KB)	Dralwik	Moving Kentucky to stayed ruling category
	01:24, 4 March 2014		959 × 593 (105 KB)	Dralwik	Implement stripes for states with stayed rulings per consensus at en:File talk:Samsex marriage in USA.svg
	15:36, 1 March 2014		959 × 593 (105 KB)	SPQRRobin	re-add Kentucky recognition, since it is equivalent to a law that has been signed but not taken effect yet
	08:40, 1 March 2014		959 × 593 (105 KB)	Plumber	revision until consensus is found
	08:39, 1 March 2014		959 × 593 (105 KB)	Plumber	proposed changes to the territories; switching up limited/foreign

Then We Wondered, What About Images? They Could Contain Spoilers...

File history

Click on a date/time to view the file as it appeared at that time.


(newest | oldest) View (newer 50 | older 50) (20 | 50 | 100 | 250 | 500)

	Date/Time	Thumbnail	Dimensions	User	Comment
current	21:48, 22 March 2014		959 × 593 (105 KB)	Bigdaddybrabantio	Michigan: https://twitter.com/AP/status/447475865589653504 , http://www.detroitnews.com/article/20140322/METRO06/303220039
	21:46, 22 March 2014		959 × 593 (105 KB)	Dralwik	Roll back Michigan
	15:55, 22 March 2014		959 × 593 (104 KB)	Dralwik	Implement beige stripes per en:File talk:Samesex marriage in USA.svg#Proposal 3 (Change black to beige/gold)
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	08:39, 1 March 2014		959 × 593 (105 KB)	Plumber	proposed changes to the territories; switching up limited/foreign

Consider This Map

Same-sex marriage law in the United States by state

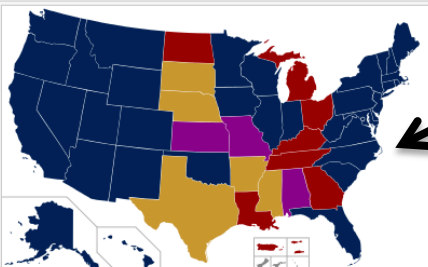
From Wikipedia, the free encyclopedia

 It has been suggested that this article be merged with *List of U.S. state laws on same-sex unions*. (Discuss)
Proposed since June 2014.

This article summarizes the laws of U.S. states and other jurisdictions regarding same-sex marriage. Currently same sex couples in 38 states and the District of Columbia may obtain marriage licenses. More than 70% of the population lives in jurisdictions where same-sex couples can legally marry. ^[1]

Contents [hide]

- 1 States
- 1.1 Alabama
- 1.2 Alaska
- 1.3 Arizona
- 1.4 Arkansas
- 1.5 California
- 1.6 Colorado
- 1.7 Connecticut
- 1.8 Delaware
- 1.9 Florida
- 1.10 Georgia
- 1.11 Hawaii
- 1.12 Idaho
- 1.13 Illinois
- 1.14 Indiana
- 1.15 Iowa
- 1.16 Kansas
- 1.17 Kentucky
- 1.18 Louisiana
- 1.19 Maine
- 1.20 Maryland
- 1.21 Massachusetts
- 1.22 Michigan
- 1.23 Minnesota



State laws regarding same-sex marriage in the United States¹

- Same-sex marriage legal
- Same-sex marriage not prohibited or recognized
- Same-sex marriage ban overturned, decision stayed indefinitely
- Same-sex marriage banned
- Same-sex marriage legality complicated^{2,3,4}

¹ Native American tribal jurisdictions have laws pertaining to same-sex marriage independent of state law. The federal government recognizes same-sex marriages, regardless of the current state of residence.

² Most counties in *Alabama* had issued same-sex marriage licenses for several weeks after a federal court legalized same-sex marriage, but all have stopped in response to a conflicting order by the state supreme court. However, the state court did not nullify same-sex marriage recognition.

³ Many jurisdictions in *Kansas* issue marriage licenses to same-sex

This Map is important to understanding the content of this article

This image is changed as the article is changed, to reflect its content

http://en.wikipedia.org/wiki/Same-sex_marriage_law_in_the_United_States_by_state

It's The Same Map If Today We Visit The June 5, 2013 Revision


Users can't view this embedded resource as it looked on June 2013 while reading the article from that time period


Same-sex marriage law in the United States by state

From Wikipedia, the free encyclopedia

This is an old revision of this page, as edited by 203.45.63.200 (talk) at 05:38, 5 June 2013 (→Hawaii: (came into effect 1 January, 2012). The present address (URL) is a permanent link to this revision, which may differ significantly from the current revision.

(diff) ← Previous revision | Latest revision (diff) | Newer revision → (diff)

 This article is in a list format that may be better presented using prose. You can help by converting this article to prose, if appropriate. Editing help is available. (April 2013)

 This article may require cleanup to meet Wikipedia's quality standards. The specific problem is: **Formatting and content layout in many sections does not follow WP:MOS.** Please help improve this article if you can. (April 2013)

This article summarizes the legal and political actions taken by the individual states of the United States regarding same-sex marriage. The texts are following.

Contents [hide]

- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- District of Columbia
- Florida
- Georgia
- Hawaii
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas



State laws regarding same-sex marriage in the United States¹

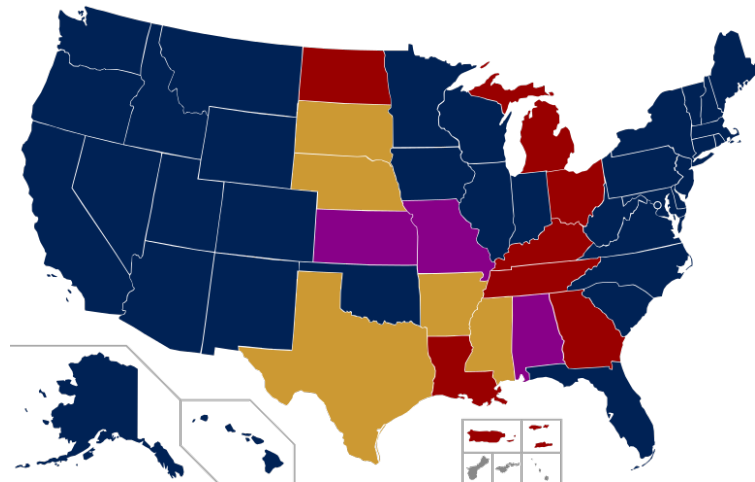
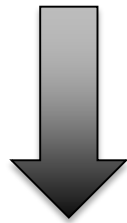
- Same-sex marriage legal
- Same-sex marriage not prohibited or recognized
- Same-sex marriage ban overturned, decision stayed indefinitely
- Same-sex marriage banned
- Same-sex marriage legality complicated^{2,3,4}

¹ Native American tribal jurisdictions have laws pertaining to same-sex

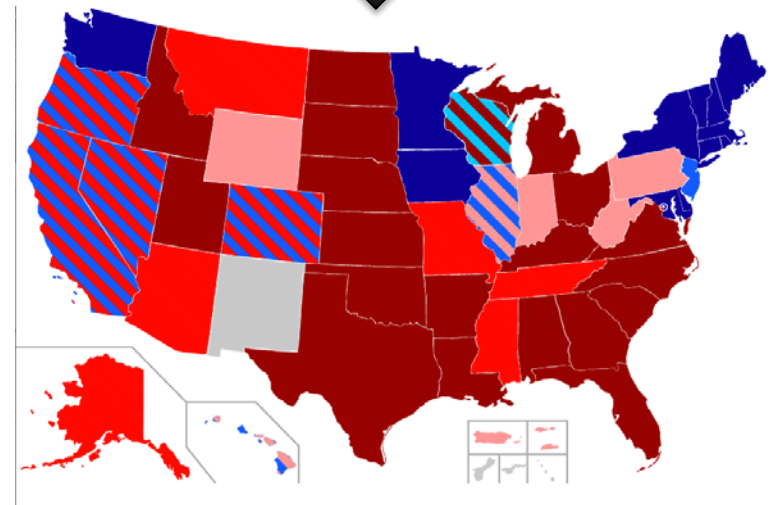
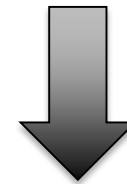
<http://en.wikipedia.org/w/index.php?title=Same-sex marriage law in the United States by state&oldid=558400004>

What Should Have Happened

This is the current map



This is the the map from June, 2013 that should have been displayed



The content of the article won't match the data in this visual aid, possibly confusing a user who wanted historical information on this topic

We Developed A Solution For Images

Manual:Hooks/ImageBeforeProduceHTML

< Manual:Hooks

ImageBeforeProduceHTML

Available from version 1.13.0

Called before producing the HTML created by a wiki image insertion

Define function:

```
public static function onImageBeforeProduceHTML( &$skin, &$title, &$file, &$frameParams, &$handlerParams, &$time, &$res ) { ... }
```

Attach hook:

```
$wgHooks[ 'ImageBeforeProduceHTML' ][] = 'MyExtensionHooks::onImageBeforeProduceHTML';
```

Called from: [Linker.php](#)

*For more information about attaching hooks, see [Manual:Hooks](#).
For examples of extensions using this hook, see [Category:ImageBeforeProduceHTML extensions](#).*

Details [\[edit | edit source \]](#)

You can skip the default logic entirely by returning false, or just modify a few things using call-by-reference.

- `&$skin`: Skin object
- `&$title`: Title object of the image
- `&$file`: File object, or false if it doesn't exist
- `&$frameParams`: Various parameters with special meanings; see documentation in `includes/Linker.php` for `Linker::makeImageLink2`
- `&$handlerParams`: Various parameters with special meanings; see documentation in `includes/Linker.php` for `Linker::makeImageLink2`
- `&$time`: Timestamp of file in 'YYYYMMDDHHIISS' string form, or false for current
- `&$res`: Final HTML output, used if you return false

The `$file` argument's `getHistory()` function of the `ImageBeforeProduceHTML` hook can be used to acquire previous revisions of images

We Could Not Extract Previous Revisions Of CSS And Javascript...

MediaWiki:Common.css: Revision history

View logs for this page

Browse history

From year (and earlier): 2014 From month (and earlier): all Tag filter:

Go

For any version listed below, click on its date to view it. For more help, see [Help:Page history](#) and [Help:Edit summary](#).
External tools: [Revision history statistics](#) · [Revision history search](#) · [Contributors](#) · [Edits by user](#) · [Number of watchers](#) · [Page view statistics](#)

(cur) = difference from current version, (prev) = difference from preceding version,
m = minor edit, → = section edit, ← = automatic edit summary
(newest | oldest) View (newer 50 | older 50) (20 | 50 | 100 | 250 | 500)

Compare selected revisions

- [\(cur | prev\)](#) 11:12, 9 May 2014 Edokter (talk | contribs) .. (35,751 bytes) (+69) .. *(hist revision 6: add inline nesting option)*
- [\(cur | prev\)](#) 22:20, 3 May 2014 Edokter (talk | contribs) .. (35,682 bytes) (-56) .. *(plainlist: nesting doesn't work (as intended))*
- [\(cur | prev\)](#) 11:38, 3 May 2014 Redrose64 (talk | contribs) .. (35,738 bytes) (+2) .. *(fixup last edit)*
- [\(cur | prev\)](#) 10:57, 3 May 2014 Edokter (talk | contribs) .. (35,736 bytes) (+20) .. *(add .hatnote class (in preparation for rmlink/hatnote merger))*
- [\(cur | prev\)](#) 19:14, 1 May 2014 Edokter (talk | contribs) .. (35,716 bytes) (+11) .. *(plainlist: partial fix)*
- [\(cur | prev\)](#) 02:53, 1 May 2014 Hahc21 (talk | contribs) .. (35,705 bytes) (+45) .. *(Nope, this is not the cause.)*

MediaWiki:Common.js: Revision history

View logs for this page

Browse history

From year (and earlier): 2014 From month (and earlier): all Tag filter:

Go

For any version listed below, click on its date to view it. For more help, see [Help:Page history](#) and [Help:Edit summary](#).
External tools: [Revision history statistics](#) · [Revision history search](#) · [Contributors](#) · [Edits by user](#) · [Number of watchers](#) · [Page view statistics](#)

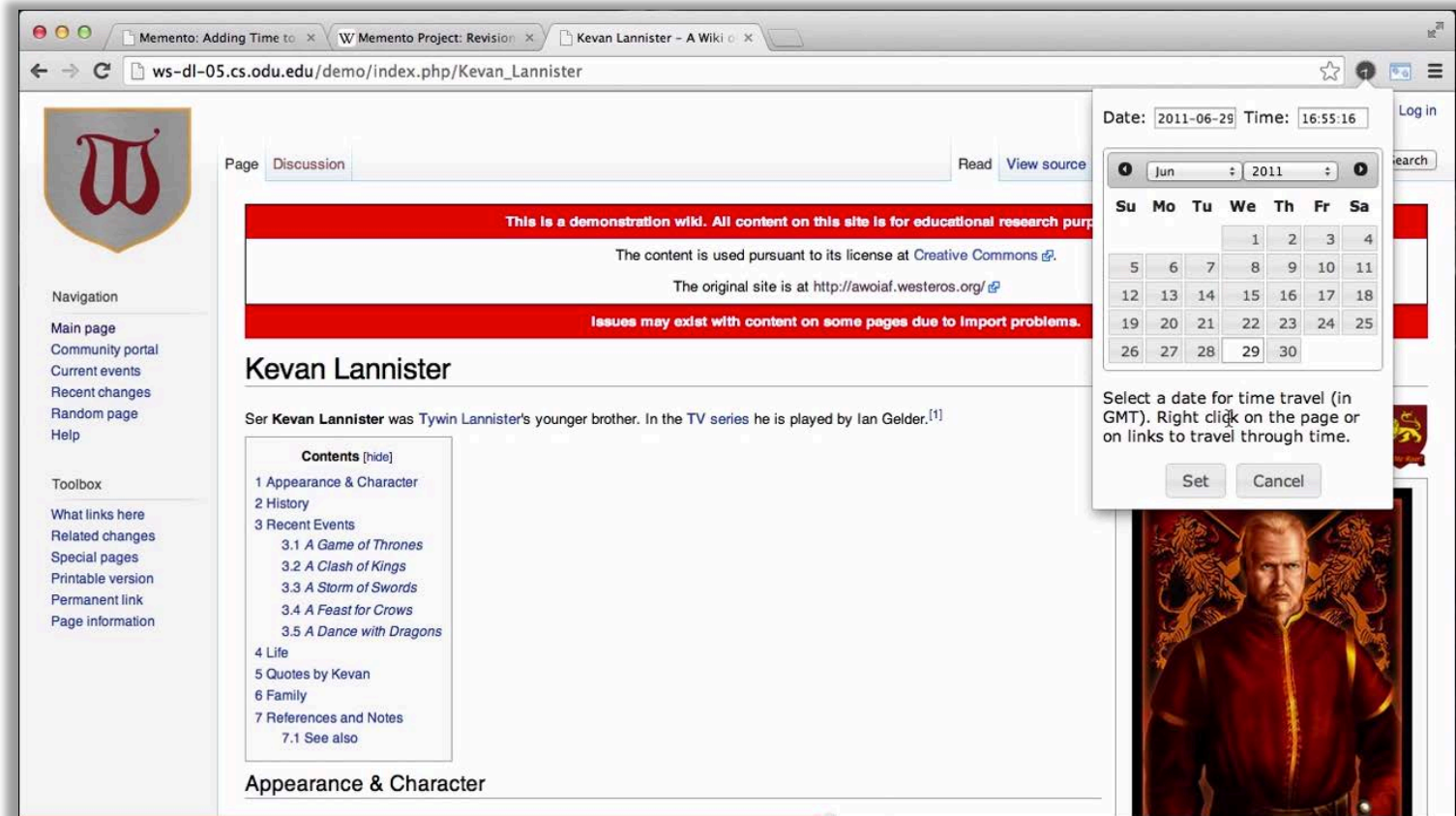
(cur) = difference from current version, (prev) = difference from preceding version,
m = minor edit, → = section edit, ← = automatic edit summary
(newest | oldest) View (newer 50 | older 50) (20 | 50 | 100 | 250 | 500)

Compare selected revisions

- [\(cur | prev\)](#) 16:29, 30 March 2014 Edokter (talk | contribs) .. (18,072 bytes) (+255) .. *(Update collapsible tables, per talk.)*
- [\(cur | prev\)](#) 19:26, 24 March 2014 Krinkle (talk | contribs) .. (17,817 bytes) (-66) .. *(Optimisation: Consistently shorten \$(), performs better as it doesn't have to re-Queryize global document, and .ready() actually ignores it anyway (\$('blabla').ready()) would work as well) so it's more semantic, and remove obsolete condition)*
- [\(cur | prev\)](#) 23:15, 18 March 2014 Edokter (talk | contribs) .. (17,883 bytes) (-347) .. *(As of 1.23wmf17, mediawiki.ui.button is now loaded by default.)*

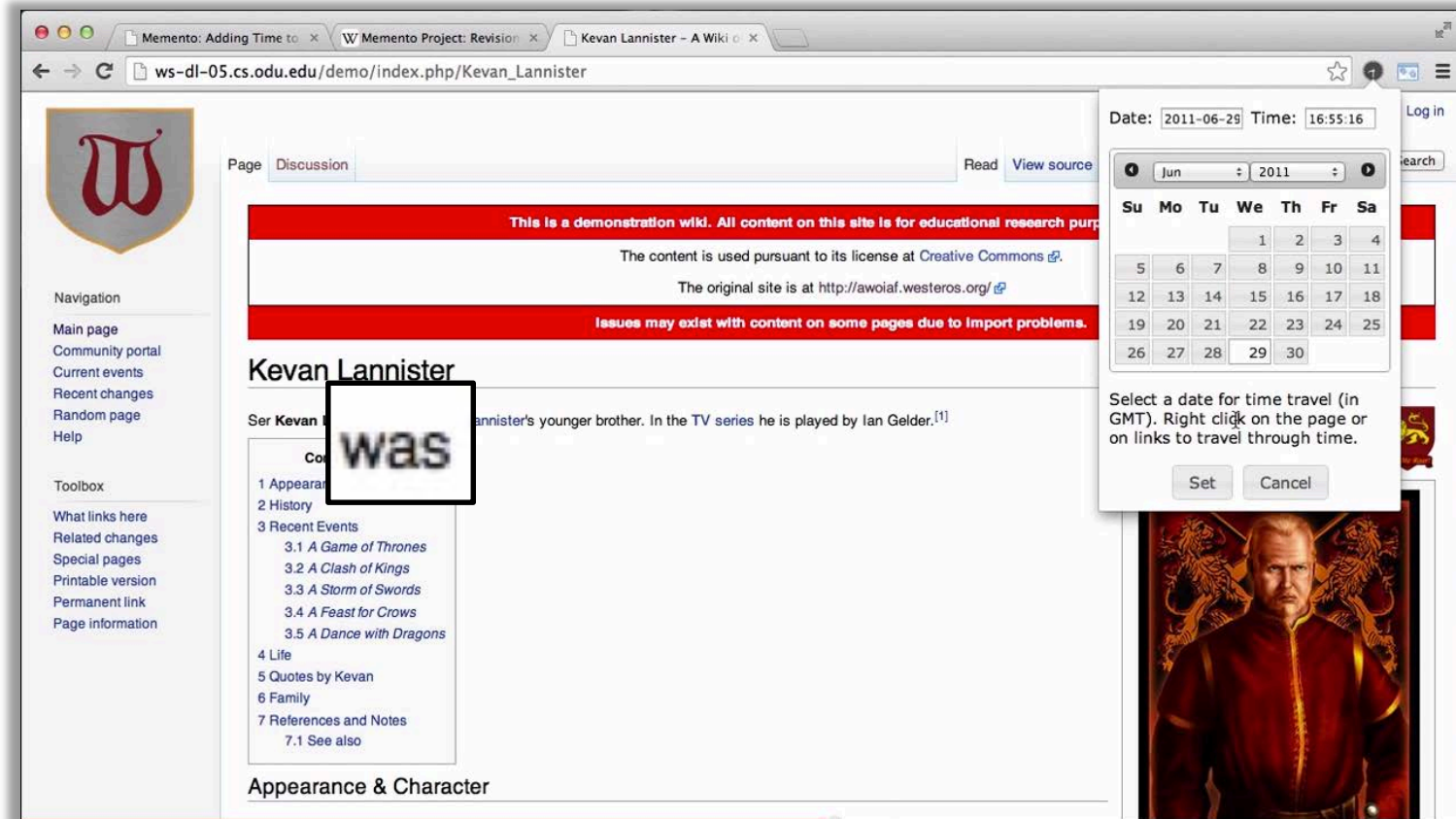
The data is present, but we could not find any way for an extension to access or render it.

We Demonstrated Avoiding Spoilers At WikiConUSA 2014...



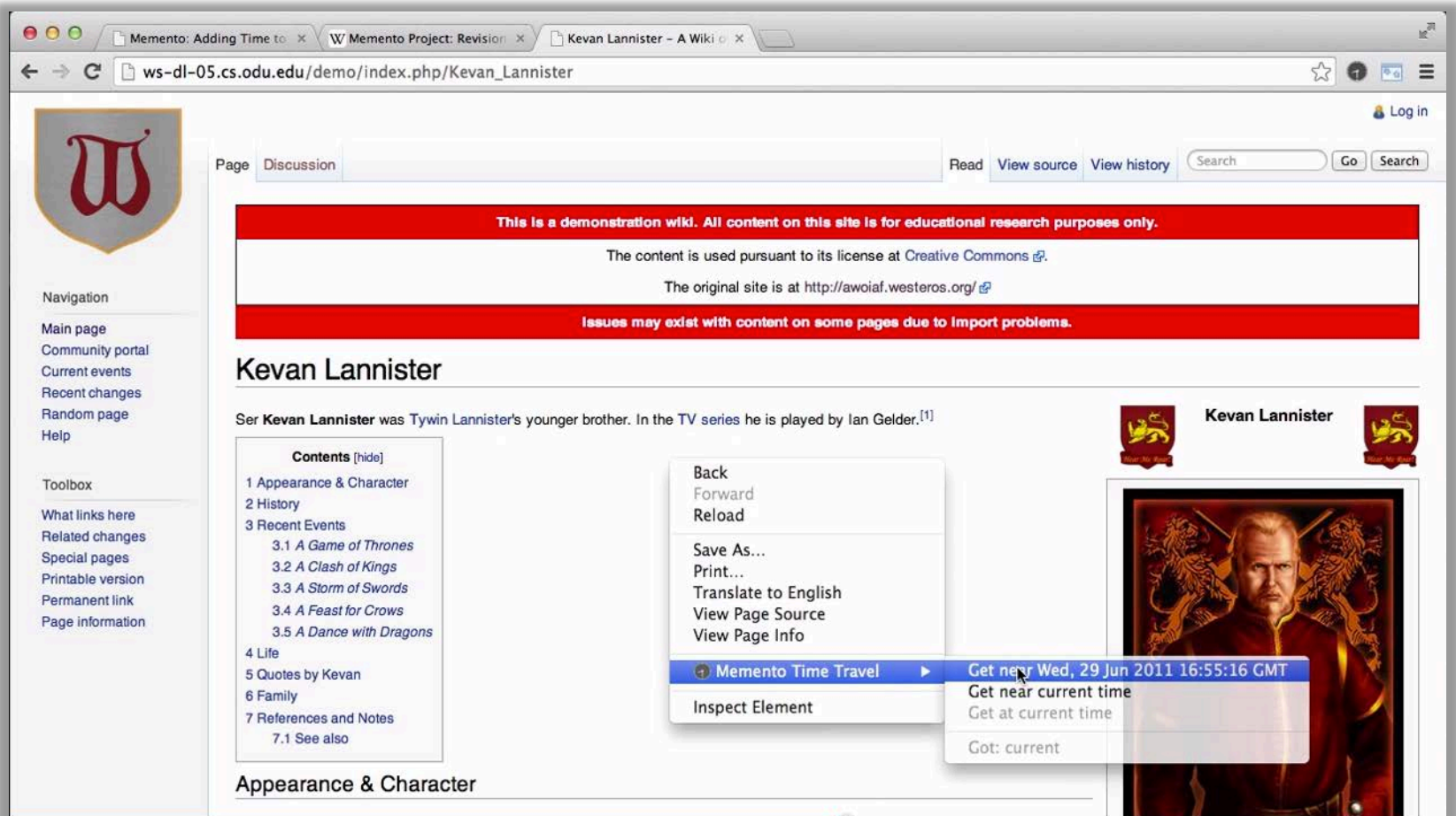
<http://ws-dl.blogspot.com/2014/06/2014-06-02-wikiconference-usa-2014-trip.html>

Even The Current Version Of The Page Contains A Spoiler!!!



We want to find information about Kevan Lannister, but haven't read the book *A Dance with Dragons* yet. We set the Memento Chrome Extension prior to the release of that book: June 29, 2011.

So We Set Memento For Chrome To The Correct Date...



We use the Memento Chrome Extension to request a revision of the page close to, but not over, our requested date.

...And Got A Page Without Spoilers

The screenshot shows a web browser window with the address bar displaying the URL: `ws-dl-05.cs.odu.edu/demo/index.php?title=Kevan_Lannister&oldid=27181`. The page features a navigation menu on the left with options like 'Main page', 'Community portal', and 'Random page'. The main content area has a red banner stating: 'This is a demonstration wiki. All content on this site is for educational research purposes only.' Below this, it says 'The content is used pursuant to its license at Creative Commons' and 'The original site is at <http://awoiaf.westeros.org/>'. Another red banner at the bottom of the main content area reads: 'Issues may exist with content on some pages due to Import problems.'

Kevan Lannister


Revision as of 18:19, 7 June 2011 by Scaflocc (Talk | contribs)
(diff) ← Older revision | Latest revision (diff) | Newer revision → (diff)

Ser **Kevan Lannister** is Tywin Lannister's younger brother. He served for years as Tywin's most trusted captain. He is known for his reliability and loyalty. Kevan recognized the superiority of his brother at an early age and was comfortable doing his duty to realize his brother's wishes, though this meant perpetually living in his shadow. It is said that Kevan never had a thought that Tywin hadn't had first. In the *TV series* he is played by Ian Gelder.^[1]

Contents [hide]

- 1 Recent Events
 - 1.1 A Game of Thrones
 - 1.2 A Storm of Swords
 - 1.3 A Feast for Crows
- 2 Appearance
- 3 Family
- 4 References and Notes
 - 4.1 See also

Recent Events



And We Avoid Spoilers for *A Dance With Dragons*...

- Background
- Related Work
- TimeGate Heuristics
- Theory of Spoiler Probability
- Measurements of Spoiler Probability
- Spoilers In The Wayback Machine
- The Memento MediaWiki Extension
- **Future Work**
- Conclusions

Where Do We Go From Here?

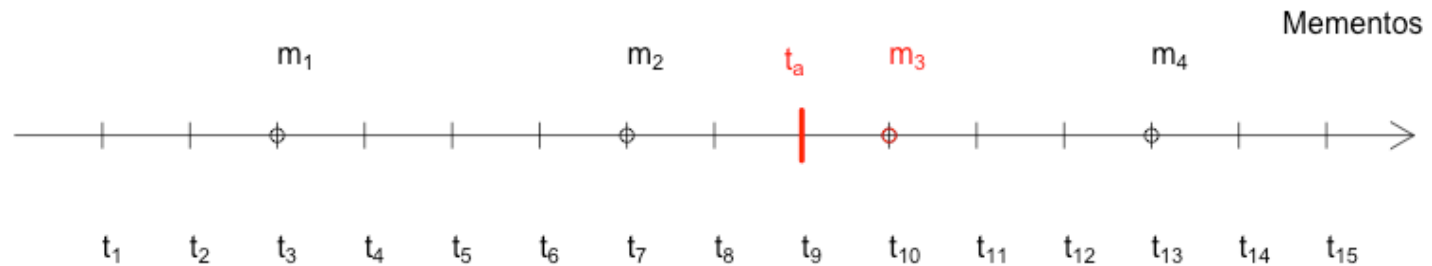
FUTURE WORK

How Do We Handle Spoilers For *Season-In-A-Day* Series?



| ORANGE |
is
the
new BLACK |

Can We Create A New Heuristic Based On mindist For Spoiler Detection?



Can we process the content of m_3 and redirect the user to m_2 if we detect spoilers?

Can We Use The Extension To Avoid Spoilers For Sports And The News?

This screenshot shows the Wikipedia article for "Iran–United States relations". The article is marked as "slanted towards recent events" and is a redirect from "Iran US relations". The main text discusses the lack of formal diplomatic relations between the Islamic Republic of Iran and the United States of America, mentioning the Pakistani Embassy in Washington and the Swiss Embassy in Tehran. A world map highlights Iran and the United States, with their respective national flags below it. The left sidebar contains the standard Wikipedia navigation menu, including "Main page", "Contents", "Featured content", and "Tools".

This screenshot shows the Wikipedia article for "Super Bowl XLIX". The article describes the 2014 NFL game between the New England Patriots and the Seattle Seahawks. It notes that the Patriots won 28-24. The article includes details about the game's location at University of Phoenix Stadium in Glendale, Arizona, and mentions that it was the most watched program in American television history. A table on the right side of the page displays the game's score and statistics. The left sidebar contains the standard Wikipedia navigation menu, including "Main page", "Contents", "Featured content", and "Tools".

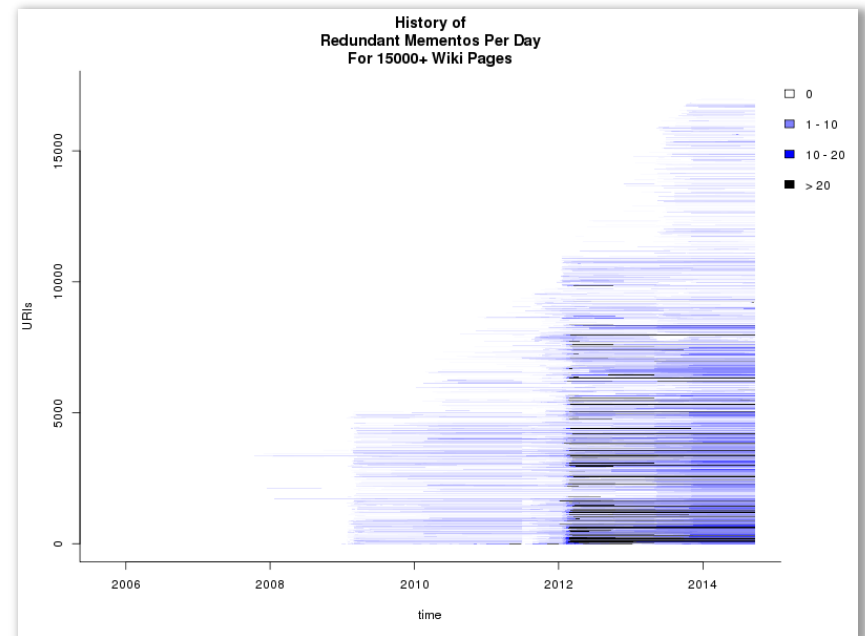
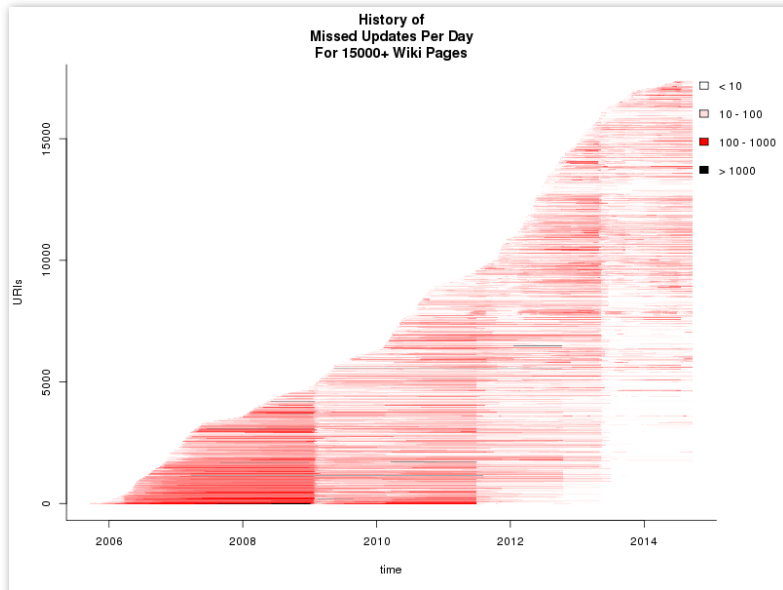
Super Bowl XLIX	
New England Patriots (AFC)	Seattle Seahawks (NFC)
28	24
ARIZONA 02:01:15	
1 2 3 4 Total	
NE	0 14 0 14 28
SEA	0 14 10 0 24
Date	February 1, 2015
Stadium	University of Phoenix Stadium, Glendale, Arizona
MVP	Tom Brady, Quarterback
Favorite	Pick 'em (even/loss-up) ^[1]

How Do We Use minfutr And minpast To Study Emerging Topics On Wikipedia

The image displays two screenshots of Wikipedia articles. The top screenshot is for the article "Same-sex marriage in the United States". It features a sidebar on the left with navigation links like "Main page", "Contents", and "Tools". The main content area includes a search bar, a "Read Edit View history" menu, and a table titled "Legal status of same-sex relationships" with columns for "Marriage" and "Performed". The text discusses the federal government's recognition of same-sex marriage in 37 U.S. states, the District of Columbia, and 22 Native American tribal jurisdictions.

The bottom screenshot is for the article "Cuba–United States relations". It also has a sidebar on the left. The main content area includes a search bar, a "Read Edit View history" menu, and a table titled "Cuba–United States of America relations" with columns for "Cuba" and "United States". The text discusses the historical relationship between the two countries, including the Cuban Revolution of 1959, the embargo, and the normalization of relations in 2014.

We Can Do Further Work On Missed Updates And Redundant Mementos



- Background
- Related Work
- TimeGate Heuristics
- Theory of Spoiler Probability
- Measurements of Spoiler Probability
- Spoilers In The Wayback Machine
- The Memento MediaWiki Extension
- Future Work
- Conclusions

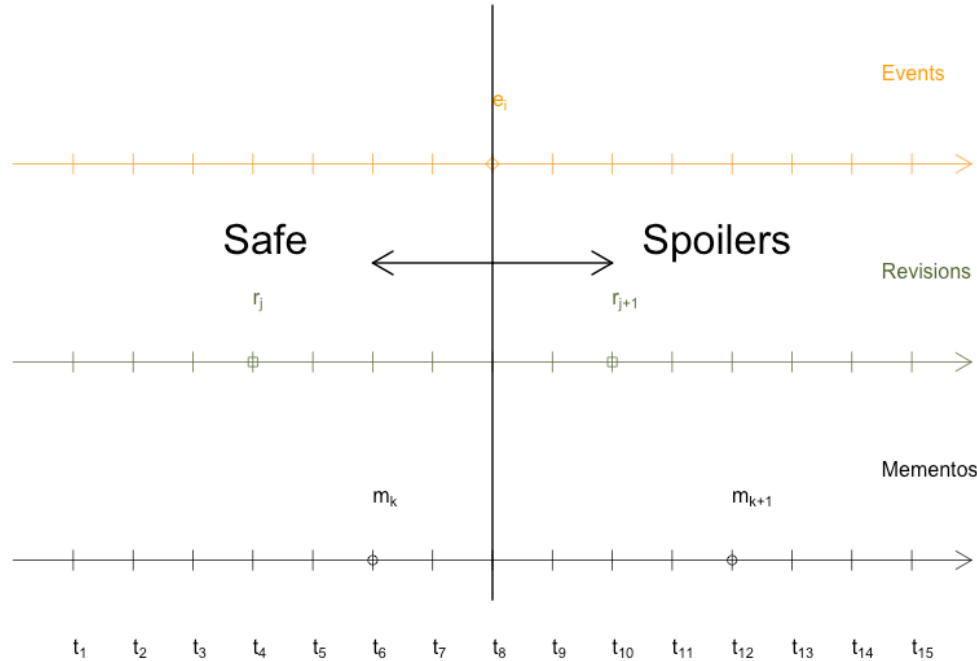
We Got Here...

CONCLUSIONS

We Introduced The Naïve Spoiler Concept



Alive



Joffrey lies dead in his mother's arms after drinking wine poisoned with the strangler.

Deceased

$$t_{r_j} \geq t_{e_i} \implies \text{spoiler}$$

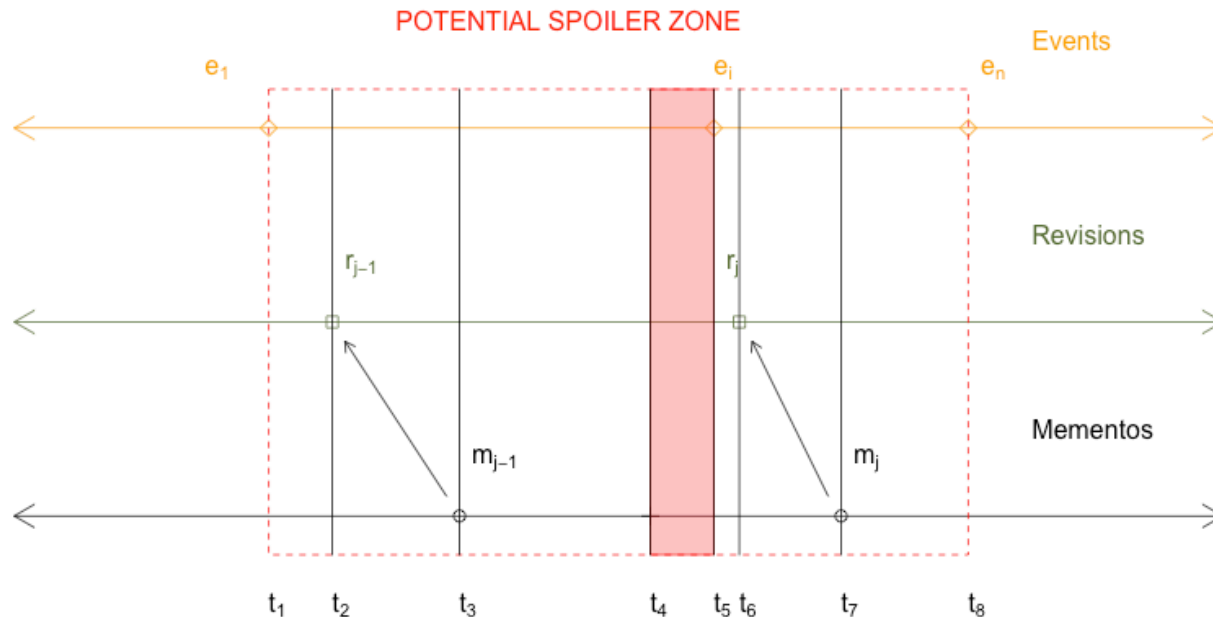
$$t_{r_j} < t_{e_i} \implies \text{safe}$$

We Have Detailed TimeGate Heuristics

TABLE 7: Summary of TimeGate Heuristics

Heuristic	Uses cost metric	Uses Content of Mementos	Potential running time	Reliably avoids spoilers?
mindist	X		$O(n)$	no
minpast	X		$O(n)$	yes
minfutr	X		$O(n)$	no
minnear	X		$O(n)$	no
eqfutr	X	X	$O(n + c)$	no
eqpast	X	X	$O(n + c)$	no
simfutr	X	X	$O(f + n)$	no
simpast	X	X	$O(f + n)$	no

We Showed How To Calculate The Probability Of Encountering A Spoiler



$$Pr(\text{spoiler}) = \frac{s}{c}$$

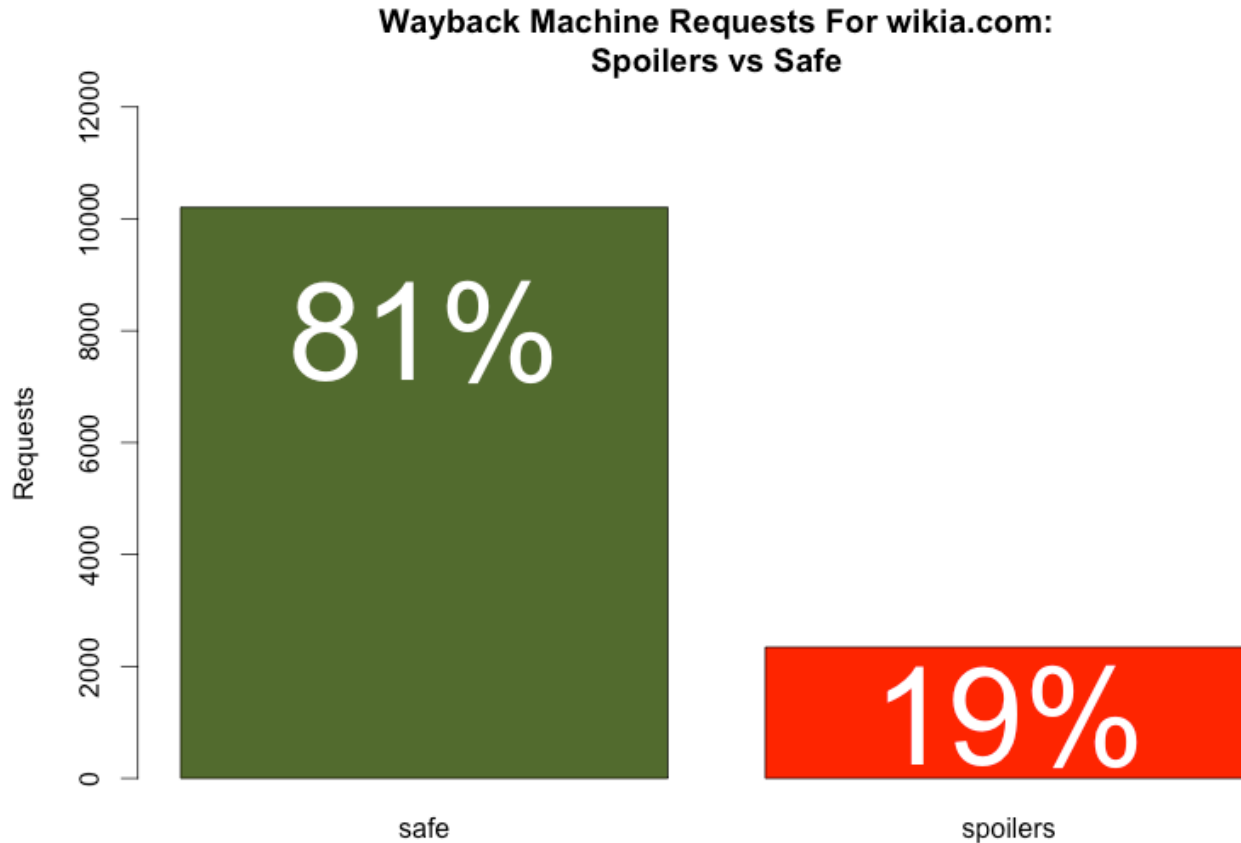
s = # of seconds where we are in a spoiler area
 c = # of seconds between e_1 and e_n

We Calculated Real Spoiler Probabilities

TABLE 11: Spoiler probabilities for most popular pages within each fan wiki

Wiki	Page Name	Probability of Spoiler	# of Spoiler Areas	# of Revisions	# of Mementos
bigbangtheory	Sheldon Cooper	0.31	69	1958	30
boardwalkempire	Nucky Thompson	0.15	31	290	15
breakingbad	Walter White	0.43	40	882	20
continuum	Keira Cameron	0.54	21	104	5
downtonabbey	Sybil Branson	0.42	23	580	3
gameofthrones	Daenerys Targaryen	0.16	24	768	29
grimm	Nick Burkhardt	0.39	30	795	5
house-of-cards	Frank Underwood	0.0	13	380	3
how-i-met-your-mother	Barney Stinson	0.55	120	588	13
lostpedia	Kate Austen	0.67	94	3531	27
madmen	Mad Men Wiki	0.22	36	250	85
ncis	Abigail Sciuto	0.67	182	404	11
onceuponatime	Emma Swan	0.36	34	1210	11
scandal	Main Page	0.60	31	250	14
trueblood	Eric Northman	0.28	47	931	14
whitecollar	Neal Caffrey	0.29	38	199	8

We Showed That the Wayback Machine Is Serving Spoilers



We Developed The Memento MediaWiki Extension To Use minpast

The screenshot shows a web browser window displaying a MediaWiki page for 'Kevan Lannister'. The browser's address bar shows the URL 'ws-dl-05.cs.odu.edu/demo/index.php/Kevan_Lannister'. The page features a red banner at the top with the text: 'This is a demonstration wiki. All content on this site is for educational research purposes only.' Below this, it states: 'The content is used pursuant to its license at Creative Commons' and 'The original site is at http://awoiaf.westeros.org/'. A second red banner below reads: 'Issues may exist with content on some pages due to import problems.' The main content area is titled 'Kevan Lannister' and contains the text: 'Ser **Kevan Lannister** was Tywin Lannister's younger brother. In the TV series he is played by Ian Gelder.^[1]' A 'Contents' table of contents is visible on the left, listing sections like 'Appearance & Character', 'History', 'Recent Events', 'Life', 'Quotes by Kevan', 'Family', and 'References and Notes'. A context menu is open over the page, showing options such as 'Back', 'Forward', 'Reload', 'Save As...', 'Print...', 'Translate to English', 'View Page Source', 'View Page Info', 'Inspect Element', and 'Memento Time Travel'. The 'Memento Time Travel' option is highlighted, and a sub-menu is open, showing options: 'Get near Wed, 29 Jun 2011 16:55:16 GMT', 'Get near current time', 'Get at current time', and 'Got: current'. The page also includes a navigation sidebar on the left and a 'Log in' button in the top right corner.


Most of All We Showed That It Is Possible To Avoid Spoilers In MediaWiki Fan Sites Using Memento

"We've had vicious kings, and we've had idiot kings...but I don't know if we've ever been cursed with a vicious idiot for a king!"
—Tyrion Lannister, summarizing King Joffrey.^[src]

Joffrey Baratheon is a major character in the *first*, *second* and *third* seasons. He is played by **Jack Gleeson** and debuts in the *series premiere*. Joffrey is the current ruler of the Seven Kingdoms, having claimed the **Iron Throne** after his father, King Robert Baratheon, died. However Joffrey is actually the bastard son of the incestuous relationship between Ser **Jaime Lannister** and Queen **Cersei Lannister**. Because of this, his claim to the Iron Throne is challenged by Robert's younger brother, **Stannis Baratheon**. He is formally styled as **His Grace, Joffrey of the Houses Baratheon and Lannister, the First of His Name, King of the Andals and the First Men, Lord of the Seven Kingdoms, and Protector of the Realm**.

Joffrey was originally betrothed to **Sansa Stark**, whom he kept captive in King's Landing after he beheaded her father for treason, as **Eddard Stark** tried to reveal the truth about his parentage. However, he later set **Sansa** aside in favor of **Margaery Tyrell**, as part of the new alliance between **House Lannister**, the primary supporters of Joffrey, and **House Tyrell**, the ruling house of the **Reach** whose support helped save King's Landing from **Stannis**

Joffrey I Baratheon



Season(s)	1, 2, 3, 4
First seen	"Winter is Coming"
Last seen	"Two Swords"
Appeared in	25 episodes (see below)
Titles	King of the Andals and the First Men Lord of the Seven Kingdoms Protector of the Realm
Also known as	King Joffrey of Houses Baratheon and

Status Alive

Origin King's Landing

Accept-Datetime: Sun, 13 April 2014 00:59:00 GMT

http://gameofthrones.wikia.com/wiki/Joffrey_Baratheon?oldid=125053

Papers/Presentations

- “Avoiding Spoilers in Fan Wikis of Episodic Fiction”, with M. L. Nelson (in preparation).
- “Using the Memento MediaWiki Extension To Avoid Spoilers”, Presentation, *WikiConference USA 2014*, June 2014.
- “Reconstructing the Past With MediaWiki: Programmatic Issues and Solutions”, Presentation, *WikiConference USA 2014*, June 2014.
- “Bringing Web Time Travel to MediaWiki: An Assessment of the Memento MediaWiki Extension”, with M. L. Nelson, H. Shankar, and H. Van de Sompel, Tech. Rep. avXiv:1406.3, Old Dominion University, June 2014.

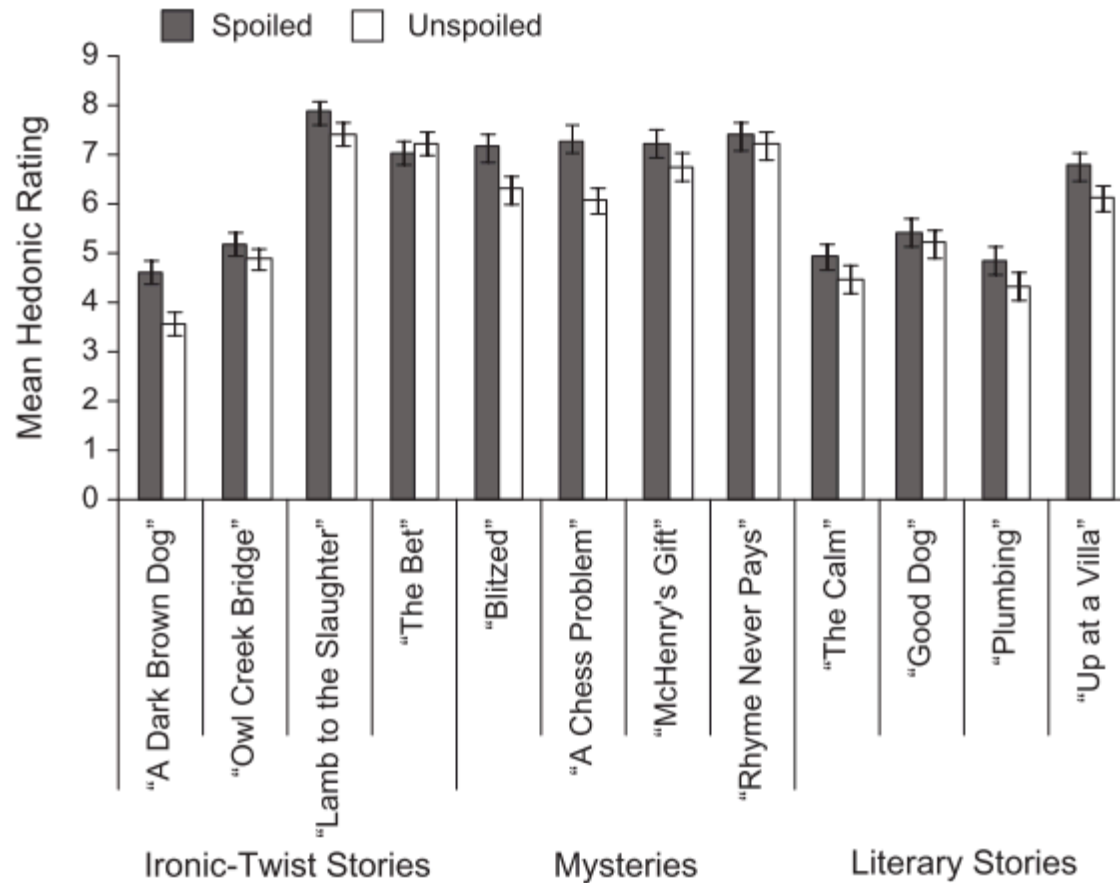
Because What You Have Seen Is Just The Tip Of The Iceberg...

BACKUP SLIDES

Backup Slides

RELATED WORK

Existing Studies: Leavitt and Christenfeld



Existing Studies: Release Date Different Per Country

- Schirra, Sun, and Bently's live-tweeting study on *Downton Abbey* unearthed a global problem of avoiding spoilers in shows that air later for fans in a different country.
- This is further echoed by Leaver's essay *The Tyranny of Digital Distance* discussing the release of *Battlestar Galactica* episodes in Australia.

Existing Studies: Johns

- Johns studied two-screen viewing (generic name for live tweeting)
- Fans of particular shows would avoid social media until they had viewed the latest show
- These fans were trying desperately to avoid spoilers
- This contradicts Leavitt's study

Typically Notices Warn Us of Spoilers

The World of Ice and Fire (US [🇺🇸](#), UK [🇬🇧](#)) will be released October 28. [\[edit\]](#)
Editors, please refrain from including information from the book prior to November 27.

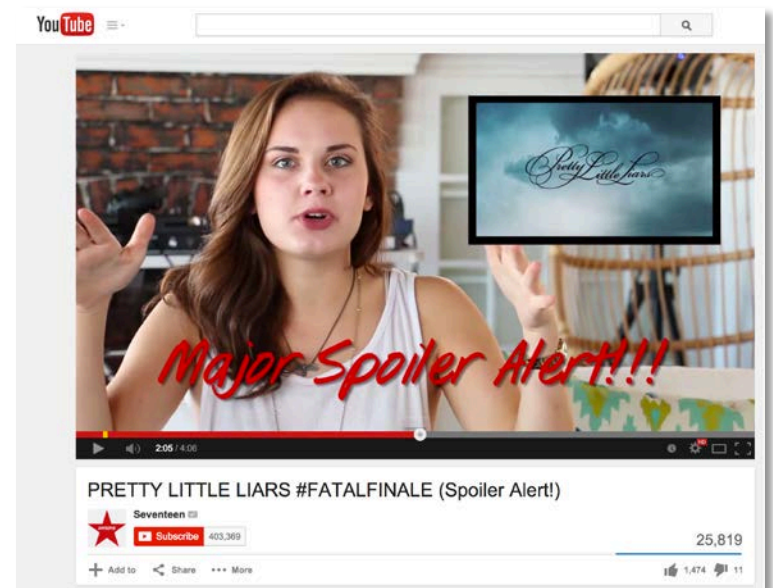
Synopsis [✎ Edit](#)

Note: The following synopsis refers to the "Theatrical cut" version of the film, which features departures from the original novel.

Spoiler warning! Plot and/or ending details follow.

TO EVERYONE WHO WILL NOT RECEIVE *SERIES 4* OF *DOWNTON ABBEY* UNTIL JANUARY 2014, THIS IS A **WARNING**: THIS WIKI WILL BE UPDATED AND EDITED AS THE EPISODES BROADCAST IN THE UNITED KINGDOM (SEPTEMBER - DECEMBER 2013)! PROCEED AT YOUR OWN RISK! **THERE WILL BE SPOILERS ABUNDANT ON MOST OF THE PAGES!** YOU HAVE BEEN WARNED!

MAJOR SPOILER ALERT: This story contains many details of Thursday's season finale episode of **ABC's *Scandal***.



Some Sites Try To Hide The Spoilers With HTML And/Or Javascript

- Will They or Won't They?: Jim and Pam. They did, sometime between seasons 3 and 4).
 - Andy and Erin.
 - Michael and Holly also seemed poised to become this until they began going out a few episodes in (which Michael hilariously lampshades):
 - Michael: "Why are you helping her? You're not even dating." She's my friend... and... ultimately my strategy is to merge this into a relationship... without her even knowing.
 - [redacted]
 - [redacted]

- Will They or Won't They?: Jim and Pam. They did, sometime between seasons 3 and 4).
 - Andy and Erin.
 - Michael and Holly also seemed poised to become this until they began going out a few episodes in (which Michael hilariously lampshades):
 - Michael: "Why are you helping her? You're not even dating." She's my friend... and... ultimately my strategy is to merge this into a relationship... without her even knowing.
 - They will.
 - Andy and Erin have finally gotten together too.
 - Although Erin dumps Andy in season 9.

SPOILER ALERT!

Don't spoil it! Hide anything with a bit of blur. Hint on mouseover. Reveal on click.

Works with images:
This just in ... kittens are just so ...

Works with copy:
Sharon ... Classic Sharon!
Turns out Jesus ... A twist worthy of M Night Shamamanalayan!
On the Itchy & Scratchy CD-ROM, is there a way to get out of the dungeon without using the wizard key?
What the hell are you talking about?

SPOILER ALERT
But at least try to look surprised when you reach the end.

To make your site spoiler free, simply include spoiler.js. Then, add this somewhere:

```
$( 'spoiler, .spoiler' ).spoilerAlert()
```

To control the maximum and partial blurs, you can pass arguments:

```
$( 'spoiler, .spoiler' ).spoilerAlert({max: 10, partial: 4})
```

Spoiler Alert! has been tested in Chrome, Firefox, Safari and Mobile Safari. Let us know if you find any bugs!

Spoiler Alert was created by Joshua Hull. Plugins by Jared White.

Existing Academic Studies Have Dealt With Social Media

- Separate studies conducted by Johns and the team of Schirra, Sun, and Bently studied two-screen viewing
- Boyd-Graber, Glasgow, and Zajac attempted to use machine learning to find spoilers in social media
- To avoid spoilers fans would avoid, or abandon:
 - Social media
 - Online web pages
 - TV shows
- This results in lost revenue to advertisers!

Existing Studies: Tsang and Yan

- Fans have abandoned
 - Social media
 - Online web pages
 - TV shows
- Because of the issues in avoiding spoilers
- This results in lost revenue to advertisers!

Hiding Spoilers: Microformats

Artjom Kurapov created a draft HTML microformat for classifying links and images.

Listing 3.1: Examples of xrate microformats for avoiding spoilers, pornography, and violence in links and images

```
<a href="http://www.example.com/who-my-character-fell-in-  
love-with" data-xrate-spoiler="100" data-xrate-sex="20  
>link on information about this episode</a>  
  

```

Hiding Spoilers: Tweetdeck

The image shows a screenshot of the TweetDeck interface with four columns: Home, Notifications, Messages, and Activity. The Home column displays several tweets, including one from Game Of Thrones. A modal window is open over the tweets, showing the 'Mute' settings for a specific tweet. The modal has a 'General' tab selected, and the 'Mute' section is active. The 'Mute' section shows the text 'Muting "#gameofthrones"' and a red 'Remove' button. The 'Accounts' section shows the account '#downtonabbey' is selected for muting. The 'Services' section is empty. A 'Done' button is at the bottom of the modal.

Home @shawnmjones

Notifications @shawnmjones

Messages @shawnmjones

Activity @shawnmjones

Game Of Thrones @GameOfThrones 31m
"I will do what Queens do. I will rule." - Daenerys #gameofthrones #gotquotes

Jefferson Bailey @jefferson_ball 1h
I assume someone offers a Certificate of Advanced Study in Committee Formation in Libraries and Archives, right?

Michael Mayr @michaelmayrde 1d
Deja Vu :-)"So You Want To Write Your Own CSV code?"
tburette.github.io/blog/2014/05/2...

Alan Liu @alanyliu 4h
<3 idea of "counter-data": MT @silvertje: Seven points for a critical approach to 'big data' societyandspace.com/material/com...

Randy Olson @randal_olson 4h
Life expectancy in the EU vs. USA. #health #dataviz

Sawood Alam @ibnesayed
Web, Digital Library, Web Archiving, Ruby on Rails, PHP, XHTML, CSS, JavaScript, ExtJS, Urdu, RTL and Linux

Justin F Brunelle favorited Shawn M. Jones @shawnmjones 20d
A useful utility I've used for making tables in the past: tablesgenerator.com; it does #LaTeX, #HTML, #MediaWiki, and #Markdown

Tiffany Gutierrez followed you **Tiffany Gutierrez** @NKoshar
Fastest Delivery Online 24 Hrs | Buy Twitter Followers - Only \$29 for 5k Followers!! see here : goo.gl/kIZWNe #best.

Weird Science followed you **Weird Science** @weird_sci
@SpaceX Engineer & @MIT PhD Tweeting Weird & Wonderful #Science. Author (dld.bz/dsM6F), Youtuber (dld.bz/dsMyC), Game Designer.

Marcus Bitzl followed you **Marcus Bitzl** @MarcusBitzl
#Technology #People #bringingideastolive

Marcus Bitzl retweeted Shawn M. Jones @shawnmjones 91d
Version 2.0.0 of the #Memento #MediaWiki Extension, demoed at #WikiConUSA, has been released: bit.ly/memento-mediaw...

Philip A. Loring @paling 20m
Some plots of who denies climate science. Interesting point at end randalolson.com/2014/09/13/who... #climatechange via @randal_olson @DatalsBeautiful

Allen Downey @AllenDowney
I am a professor of computer science @olincollege and author of Think X (for all X).

Chris Beaumont @BeaumontChris
Software Engineer at Harvard's Center for Astrophysics. I use data and code to solve problems.

General

Mute Text content

Using #downtonabbey

Mute

Muting "#gameofthrones"

Remove

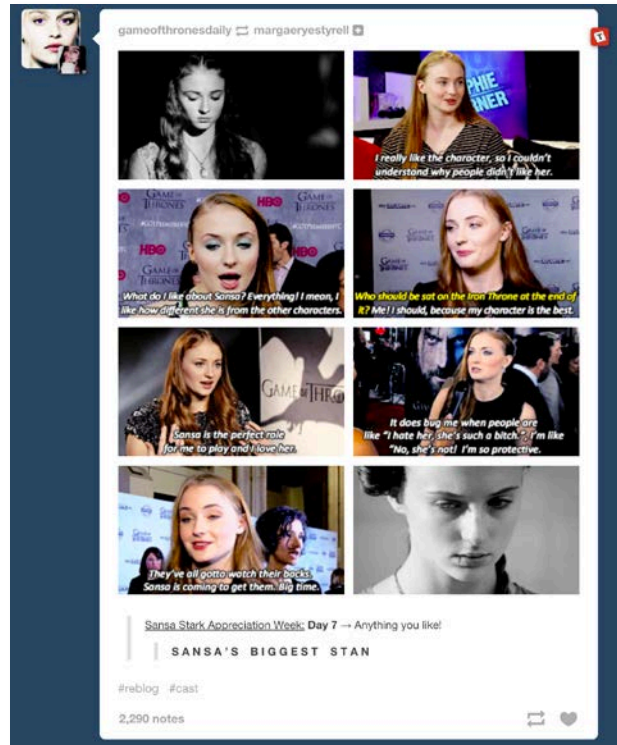
Done

Hiding Spoilers: Tumblr Savior



gameofthronesdaily made a post containing: 'sansa stark' -- *click to show.*

Tags: #reblog#cast



Hiding Spoilers: Netflix Spoiler Foiler



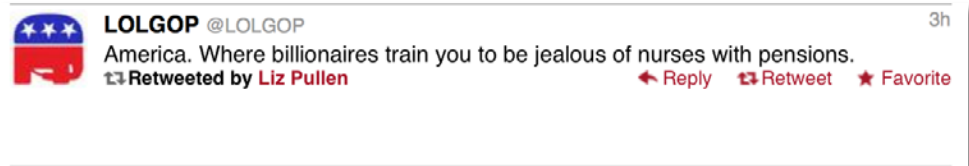
LOLGOP @LOLGOP

3h

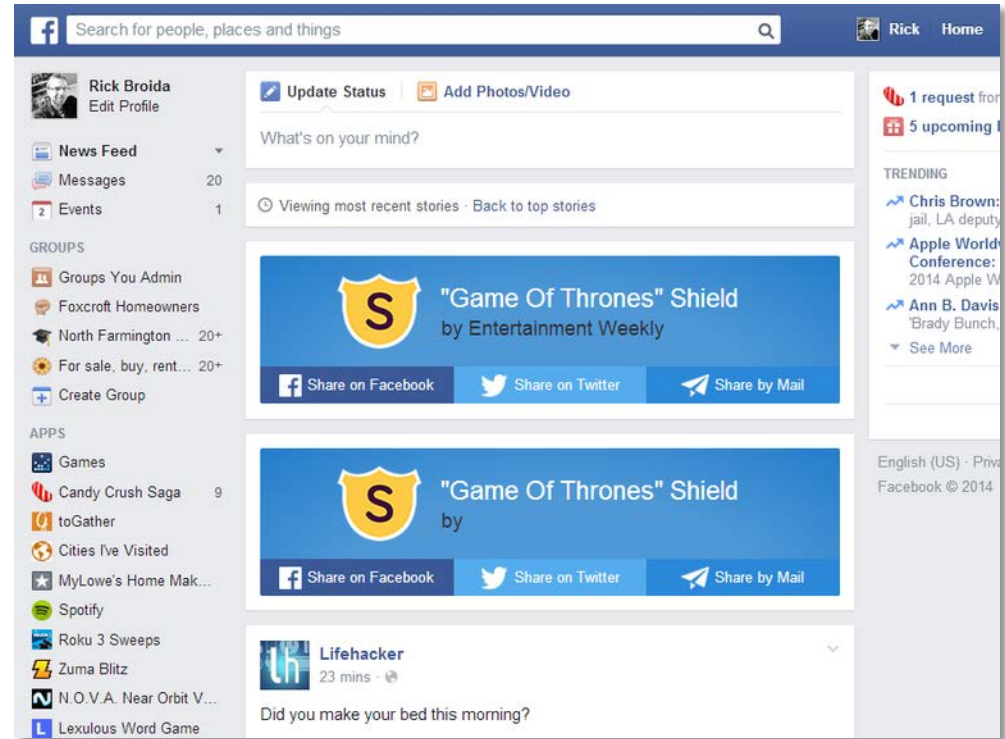
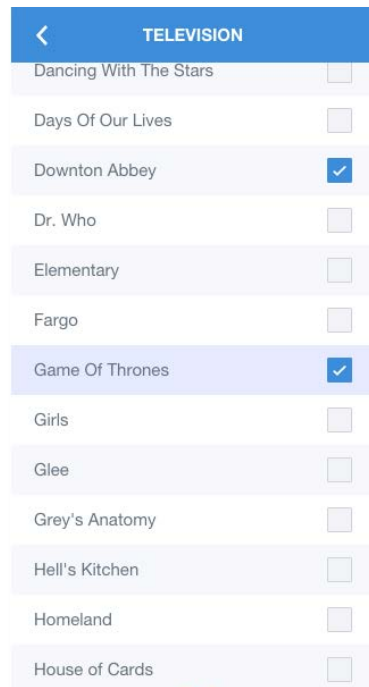
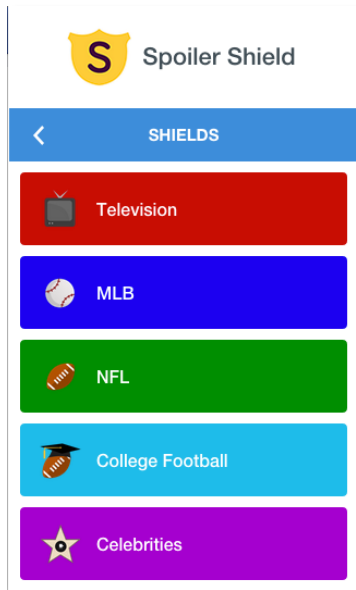
SPOILER ALERT

This tweet contains potential spoilers! Click or tap to reveal

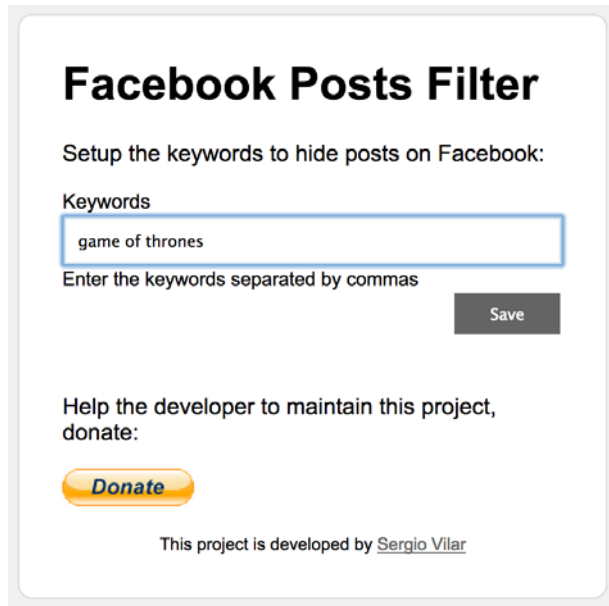
Hiding Spoilers: Netflix Spoiler Foiler



Spoiler Shield Is A Spoiler Blocking Tool For Social Media



Hiding Spoilers: Facebook Posts Filter And Open Tweet Filter



Facebook Posts Filter

Setup the keywords to hide posts on Facebook:

Keywords

Enter the keywords separated by commas

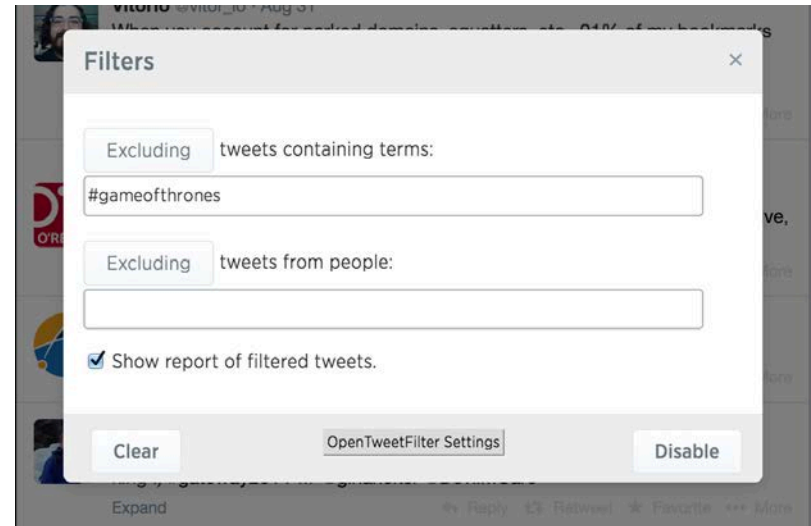
Save

Help the developer to maintain this project, donate:

[Donate](#)

This project is developed by [Sergio Vilar](#)

Any Facebook posts with these keywords will not be displayed.



Filters

Excluding tweets containing terms:

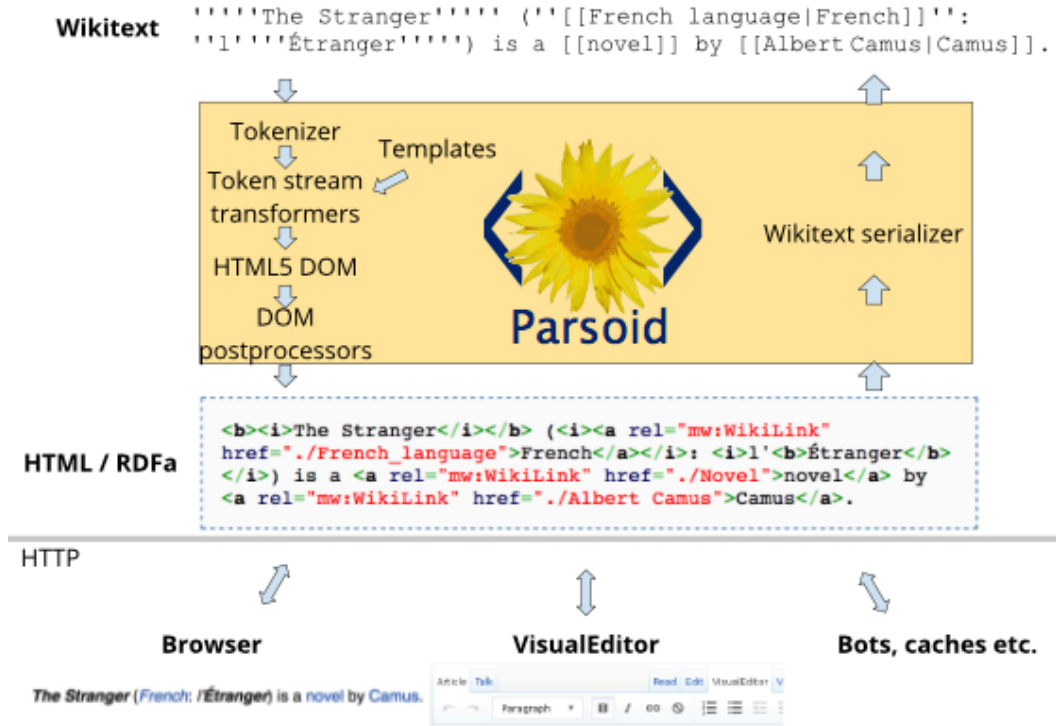
Excluding tweets from people:

Show report of filtered tweets.

Clear [OpenTweetFilter Settings](#) Disable

Any tweets with these keywords will not be displayed.

Archiving In MediaWiki: Parsoid



Archiving In MediaWiki: Collection Extension

Collection

From Simple English Wikipedia - the free encyclopedia that anyone can change

You can collect articles, generate and download a PDF file from article collections, order books from a print-on-demand partner and save article collections for later use or to share them.

See [Help:Collections](#) for more information about collections.

My Collection

Title:

Subtitle:

Contents

[\[Create new chapter\]](#) [\[Sort articles alphabetically\]](#) [\[Clear collection\]](#)

- ▀ ▼ **Basic topics** [\[Rename\]](#) [\[Remove\]](#)
 - ▀ ▲ ▼ Falsetto [\[Remove\]](#)
 - ▀ ▲ ▼ Singing [\[Remove\]](#)
 - ▀ ▲ ▼ Soprano [\[Remove\]](#)
 - ▀ ▲ ▼ Mezzo-soprano [\[Remove\]](#)
 - ▀ ▲ ▼ Baritone [\[Remove\]](#)
 - ▀ ▲ ▼ Harpsichord [\[Remove\]](#)
- ▀ ▲ ▼ **Composers** [\[Rename\]](#) [\[Remove\]](#)
 - ▀ ▲ ▼ Ludwig van Beethoven [\[Remove\]](#)
 - ▀ ▲ ▼ Johannes Brahms [\[Remove\]](#)
 - ▀ ▲ ▼ Wolfgang Amadeus Mozart [\[Remove\]](#)
 - ▀ ▲ Joseph Haydn [\[Remove\]](#)

Order Printed Book

You can order a printed book containing your article collection by visiting one of the following print-on-demand partners:

- ▀  [Order book from PediaPress - About PediaPress](#)

Download Collection as PDF

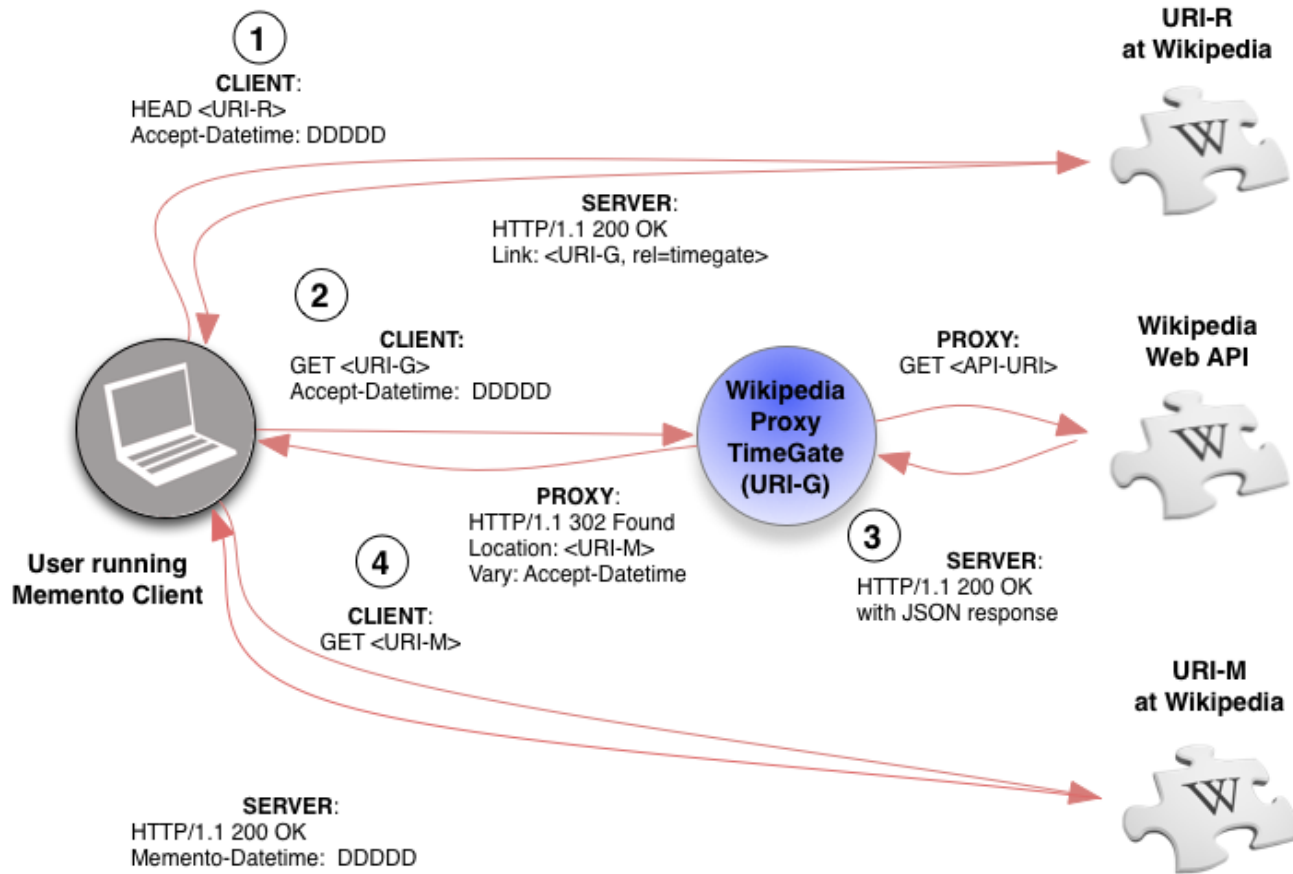
To download an automatically generated PDF file of your article collection, click the button.

Save Collection

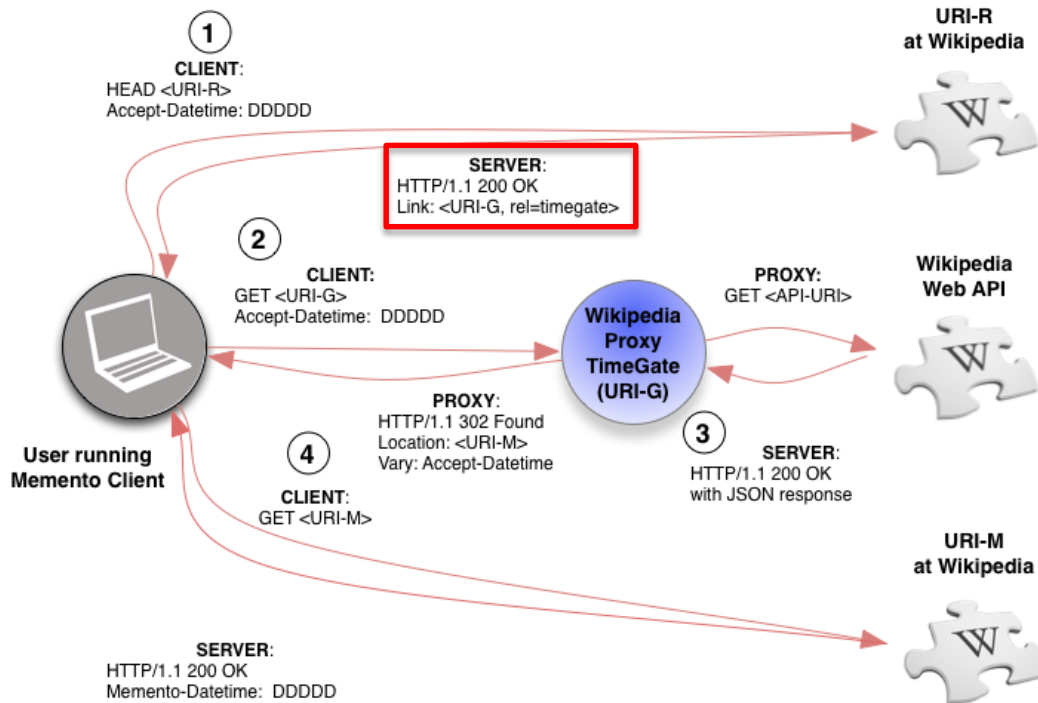
If you want to save collections for later use, please [log in](#) or [create an account](#).



Seamlessly Viewing Past Versions Of MediaWiki Pages



Seamlessly Viewing Past Versions Of MediaWiki Pages



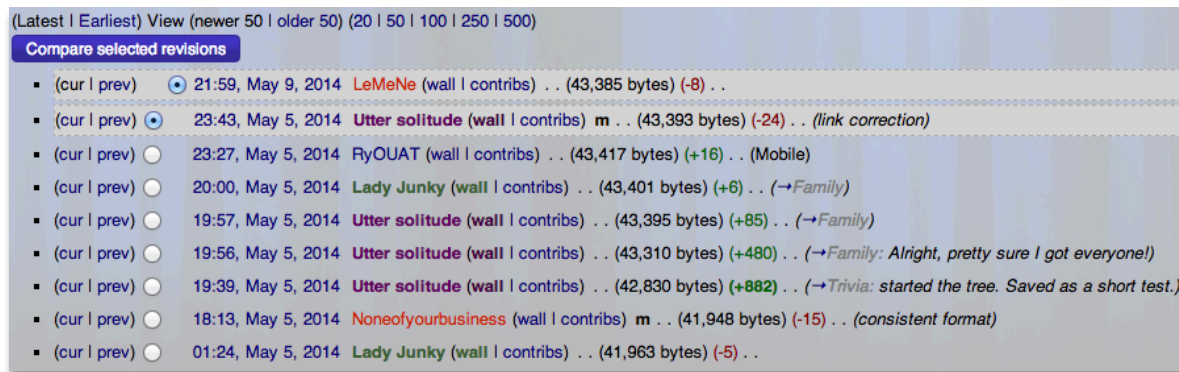
Wikipedia Proxy Does Not Address The Problem For All Wikis.

To Be Generic For Any Wiki, The Wiki Server Itself Would Need To Send A Link Header Back Indicating The Uri Of The TimeGate To Use.

Backup Slides

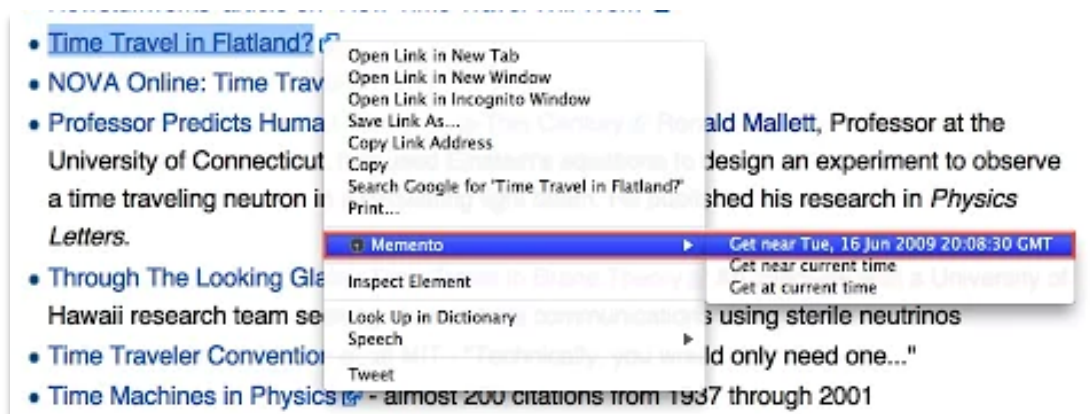
ALTERNATIVES TO THE MEMENTO MEDIAWIKI EXTENSION (AND WHY IT IS BETTER!)

Memento Extension vs. Manually Getting Page Revision



This Is Very Time Consuming.

Memento Let's You Browse Through The Whole Web With A Given Date!



Why Do It When Memento Will Do It For You?

Memento Extension vs. MediaWiki API

JSON:

```
{"revid":607345961,"parentid":607210719,"timestamp":"2014-05-06T16:07:52Z"}
```

XML:

```
<rev revid='607519915' parentid="607345961" user="Marklemagne"  
timestamp="2014-05-07T19:00:26Z"/>
```

Only A Custom MediaWiki Client Can Turn These Oldid Entries Into Uris.

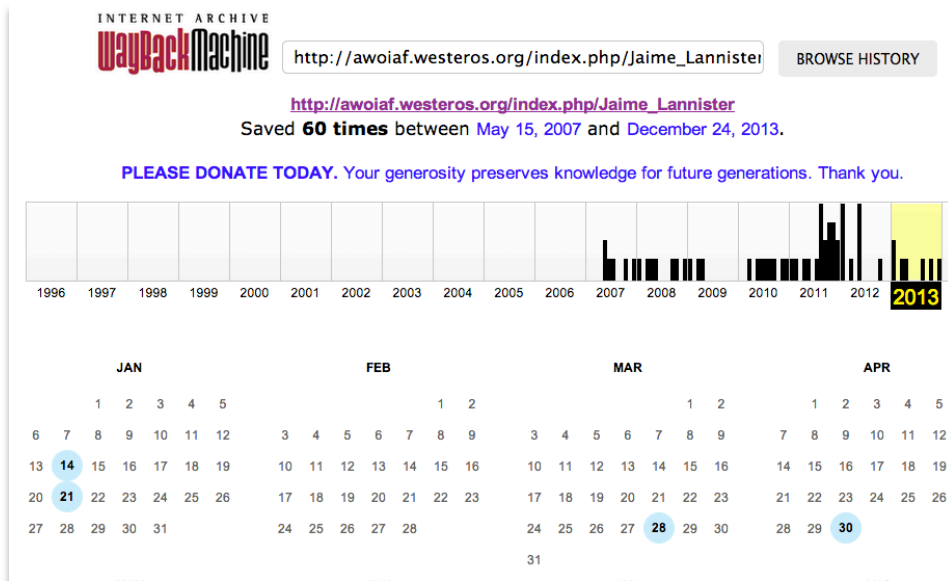
Memento Is A Web Standard Way Of Accessing Past Web Resources And Is Already Implemented For Many Different Applications (Web Archives, Etc.)

Memento Extension vs. MediaWiki API

Link: <http://ws-dl-05.cs.odu.edu/demo-302-recommended-relations/index.php/Daenerys_Targaryen>; rel="original latest-version",
<http://ws-dl-05.cs.odu.edu/demo-302-recommended-relations/index.php/Special:TimeGate/Daenerys_Targaryen>; rel="timegate",
<http://ws-dl-05.cs.odu.edu/demo-302-recommended-relations/index.php/Special:TimeMap/Daenerys_Targaryen>; rel="timemap";
type="application/link-format"; from="Sun, 22 Apr 2007 15:01:20 GMT"; until="Fri, 27 Sep 2013 20:48:24 GMT",
<http://ws-dl-05.cs.odu.edu/demo-302-recommended-relations/index.php?title=Daenerys_Targaryen&oldid=1499>; rel="first memento";
datetime="Sun, 22 Apr 2007 15:01:20 GMT",
<http://ws-dl-05.cs.odu.edu/demo-302-recommended-relations/index.php?title=Daenerys_Targaryen&oldid=107643>; rel="last memento";
datetime="Fri, 27 Sep 2013 20:48:24 GMT"

Memento Also Follows The RESTful Principle Of “Follow Your Nose”, Indicating Additional Resources To Access From Here.

Memento Extension vs. Internet Archive



The Internet Archive Only Gets *Some* Of The Revisions Of A Given Page.

MediaWiki Has *All* Of The Revisions Of A Given Page.

- (cur | prev) 18:06, 30 April 2013 Ser_Aeron_Connel (Talk | contribs) (30,729 bytes) (→Quotes)
- (cur | prev) 16:18, 30 April 2013 Scafloc (Talk | contribs) (30,690 bytes) (→Character and Appearance)
- (cur | prev) 16:48, 27 April 2013 Ser_Aeron_Connel (Talk | contribs) m (30,684 bytes) (→A Storm of Swords)
- (cur | prev) 13:05, 6 April 2013 Arek (Talk | contribs) m (30,488 bytes) (→Quotes about Jaime)
- (cur | prev) 23:54, 29 March 2013 Arthur88 (Talk | contribs) (30,486 bytes) (→Quotes about Jaime)
- (cur | prev) 23:53, 29 March 2013 Arthur88 (Talk | contribs) (30,485 bytes) (→Quotes about Jaime)
- (cur | prev) 16:43, 25 March 2013 Arek (Talk | contribs) m (30,325 bytes) (→Quotes)
- (cur | prev) 16:18, 13 March 2013 Scafloc (Talk | contribs) (30,305 bytes)
- (cur | prev) 21:21, 10 March 2013 Scafloc (Talk | contribs) (30,239 bytes)
- (cur | prev) 17:30, 6 March 2013 Thenedstark (Talk | contribs) (30,058 bytes)
- (cur | prev) 13:06, 27 February 2013 Arthur88 (Talk | contribs) (30,054 bytes)
- (cur | prev) 01:15, 2 February 2013 Ryangibsonstewart (Talk | contribs) (29,329 bytes) (standard size)
- (cur | prev) 10:11, 30 January 2013 Scafloc (Talk | contribs) (29,329 bytes)
- (cur | prev) 05:47, 16 January 2013 Inmyownsummerami (Talk | contribs) m (29,089 bytes) (→The Kingslayer)
- (cur | prev) 10:32, 9 January 2013 Scafloc (Talk | contribs) (29,088 bytes) (→A Feast for Crows)
- (cur | prev) 10:15, 9 January 2013 Scafloc (Talk | contribs) m (29,039 bytes)

Memento Extension vs. Other MediaWiki Time Travel Extensions

Extension:BackwardsTimeTravel

This extension stores its source code on a wiki page. Please be aware that this code may be unreviewed or maliciously altered. They may contain security holes, outdated interfaces that are no longer compatible etc.

Note: No localisation updates are provided for this extension by translatewiki.net.

The developer is encouraged and invited to request access to MediaWiki's code repository to address this.

Contents [hide]

- 1 What can this extension do?
 - 1.1 Features
 - 1.2 Issues and roadmap
- 2 Usage
- 3 Download instructions
- 4 Installation
 - 4.1 Configuration parameters
- 5 Code
- 6 See also

What can this extension do? [edit | edit source]

The extension BackwardsTimeTravel intends to display the old versions of an article exactly as it was at the time of publishing. Indeed, with the standard version of MediaWiki, displaying an old version of a page retrieve only the old wikitext of the page and use the current versions for the templates, use the current time in the variables, and so on.

In the facts, the rendering with this extension is often very very near of the old version, but it can remain on some pages details which is impossible to retrieve (see issues), like the value of the magic word {NUMBEROFARTICLES}.

Features [edit | edit source]

old refers to the time of publishing.

- Use the old version of the templates (but the templates shouldn't have been moved or deleted, see also issues and parameters).
- Use the old time.

MediaWiki extensions manual

BackwardsTimeTravel

Release status: **experimental**

Implementation Parser extension

Description Retrieve the exact rendering of a page at a given date

Author(s) Seb33^{mh}

Latest version 0.1

MediaWiki 1.10.1

License GPL

Download No link

Parameters [Expand]

Hooks used [Expand]

Translate the BackwardsTimeTravel extension if it is available at translatewiki.net

Check usage and version matrix; [code metrics](#) ⓘ

While These Extensions Just Work For MediaWiki, ***Memento Works For The Entire Web.***

Extension:TimeMachine

The **TimeMachine** extension allows you to browse a wiki just how it was in a given date in the past. By going to Special:TimeMachine, you can set a date and from then on whenever they visit a page, you will see the first revision previous to that date. By visiting Special:TimeMachine again, or emptying your cookies, you can return to browsing the wiki as always.

Installation [edit | edit source]

- Download and extract the files in a directory called "timemachine" in your "extensions/" folder. If you're a developer and this extension is in a Git repository, then instead you should clone the repository using:

```
git clone https://gerrit.wikimedia.org/r/p/mediawiki/extensions/TimeMachine.git
```
- Add the following code at the bottom of your LocalSettings.php:

```
require_once("$IP/extensions/TimeMachine/TimeMachine.php");
```
- Done! Navigate to "Special:Version" on your wiki to verify that the extension is successfully installed.

See also [edit | edit source]

- Extension:Memento
- Extension:BackwardsTimeTravel

MediaWiki extensions manual

TimeMachine

Release status: **stable**

Implementation Special page

Description Allows to browse a wiki as it was in a given date in the past.

Author(s) Luis Felipe Schenone^{mh}

Latest version 0.1 (2013-10-11)

MediaWiki 1.21+

PHP 5.3+

Database changes No

License GPL

Download **Download snapshot** [Git master] [Get IT!](#)

- [repo summary](#)
- [browse file tree](#)
- [commit history](#)

Example <http://lfschenone.com/Special:TimeMachine> ⓘ

Hooks used [Expand]

Translate the TimeMachine extension if it is available at translatewiki.net

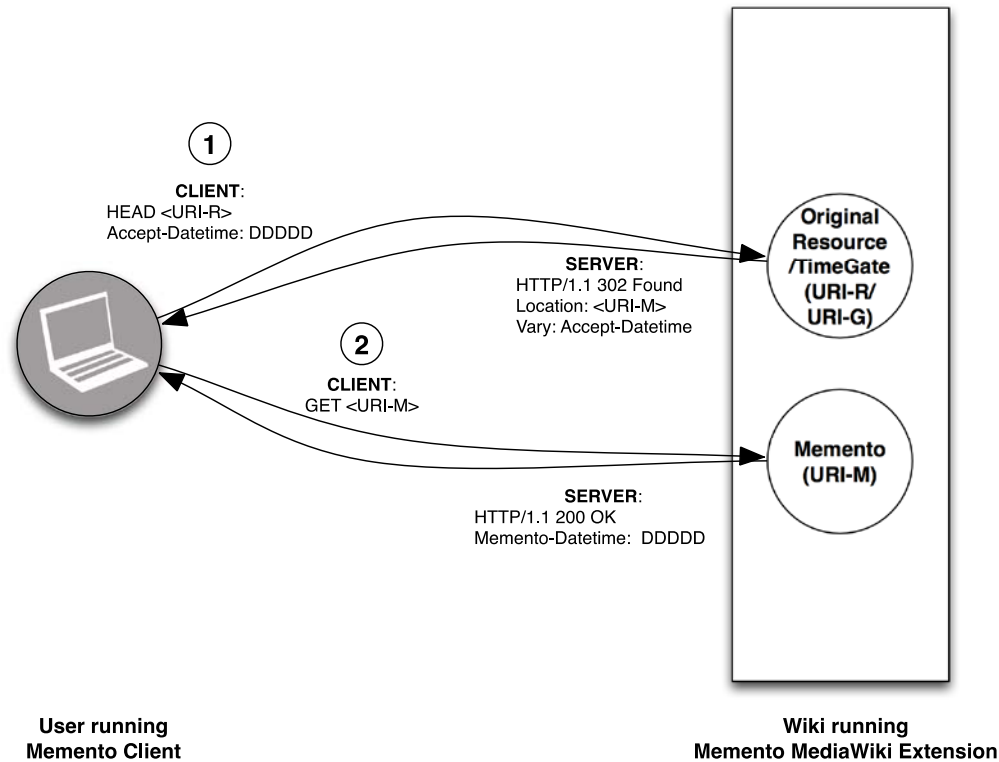
Check usage and version matrix; [code metrics](#) ⓘ

With The Memento Extensions, One Can Browse The Entire Web Spoiler Free By Seamlessly Accessing Web Archives And Other Resources Through Memento.

Backup Slides

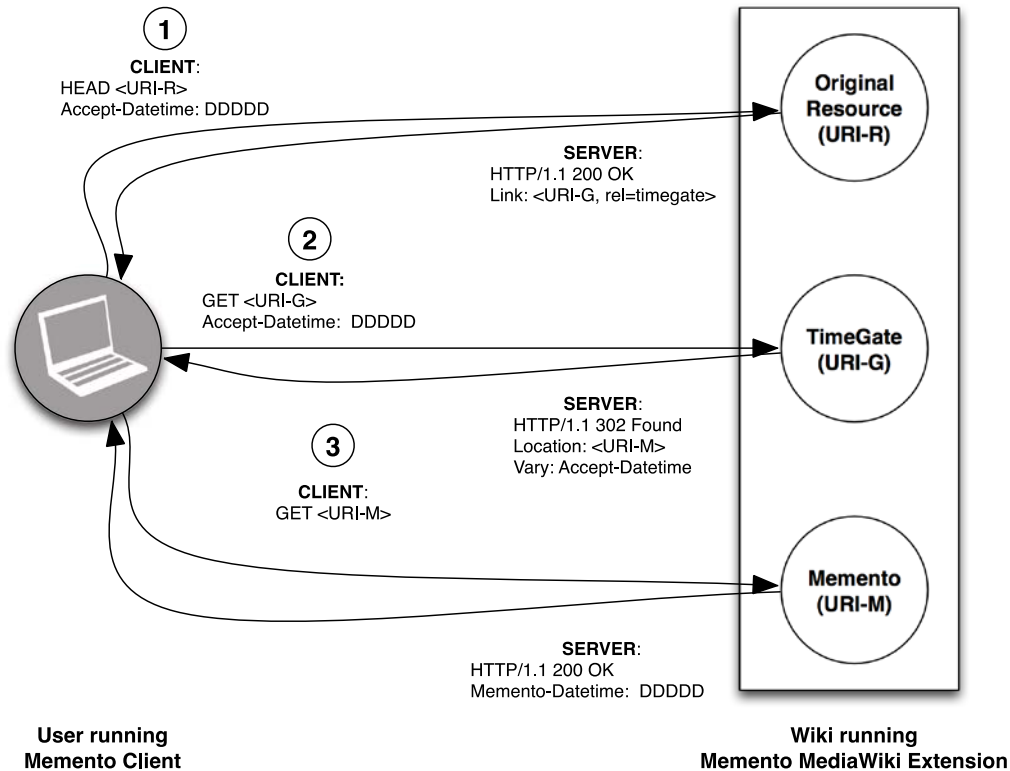
MEMENTO PATTERN COMPARISON IN THE MEMENTO MEDIAWIKI EXTENSION

Assuming An Original Resource Is a TimeGate (Pattern 1.1)



$$d_{p1.1} = B + RTT_B + M + RTT_M$$

Looking For A TimeGate (Pattern 2.1)



$$d_{p2.1} = a + RTT_a + b + RTT_b + M + RTT_M$$

Comparing These Two Involves Evaluating Their Performance

$$d_{p1.1} < d_{p1.2}$$

$$B + RTT_B + \cancel{M} + \cancel{RTT_M} < a + RTT_a +$$

$$b + RTT_b + \cancel{M} + \cancel{RTT_M}$$

$$B + RTT_B < a + RTT_a + b + RTT_b$$

$$B + \cancel{RTT_B} < a + RTT_a + b + \cancel{RTT_b}$$

$$B < a + RTT_a + b$$

$$B < a + b + RTT_a$$

a = time to generate just a normal wiki page

b = time to perform datetime negotiation when the TimeGate is the same

B = time to perform datetime negotiation when the TimeGate is different

M = time to generate memento

RTT_a , RTT_b , RTT_B , RTT_M = round trip times for a , b , B , and M

Using curl

We Obtained the Value of a

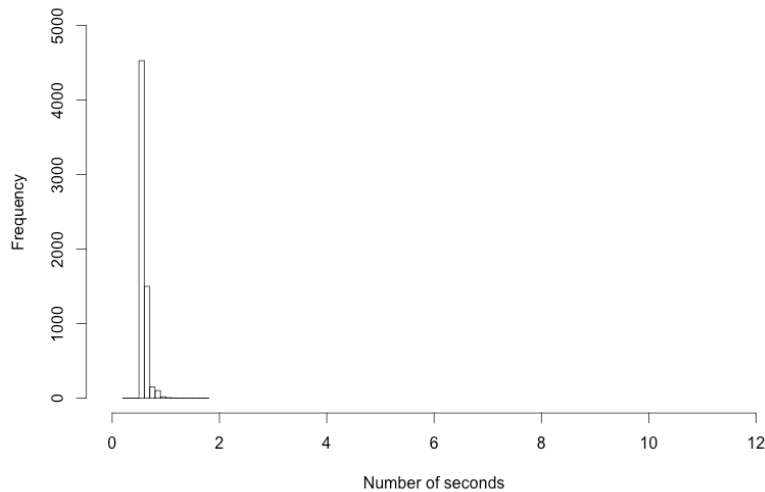
$$B < a + b + RTT_a$$

With caching, a turns out to be about 0.1 seconds on average

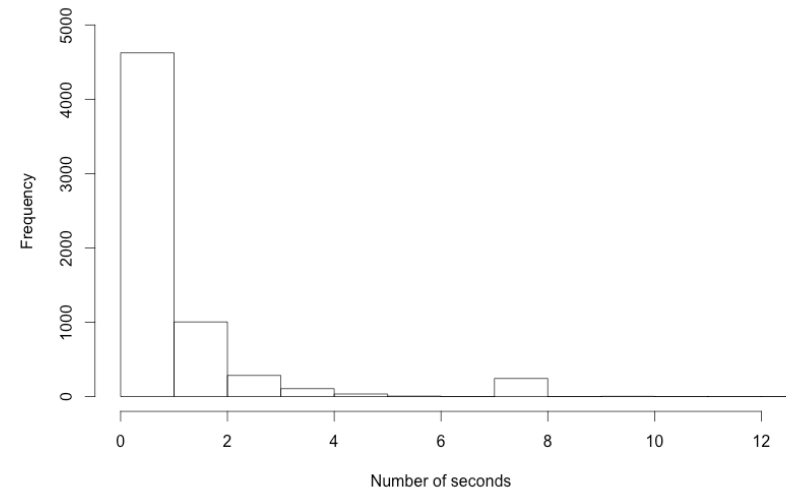
Using seige

We Obtained Values for b and B

Histogram of datetime negotiation times for Special:TimeGate



Histogram of datetime negotiation times for URI-R=URI-G



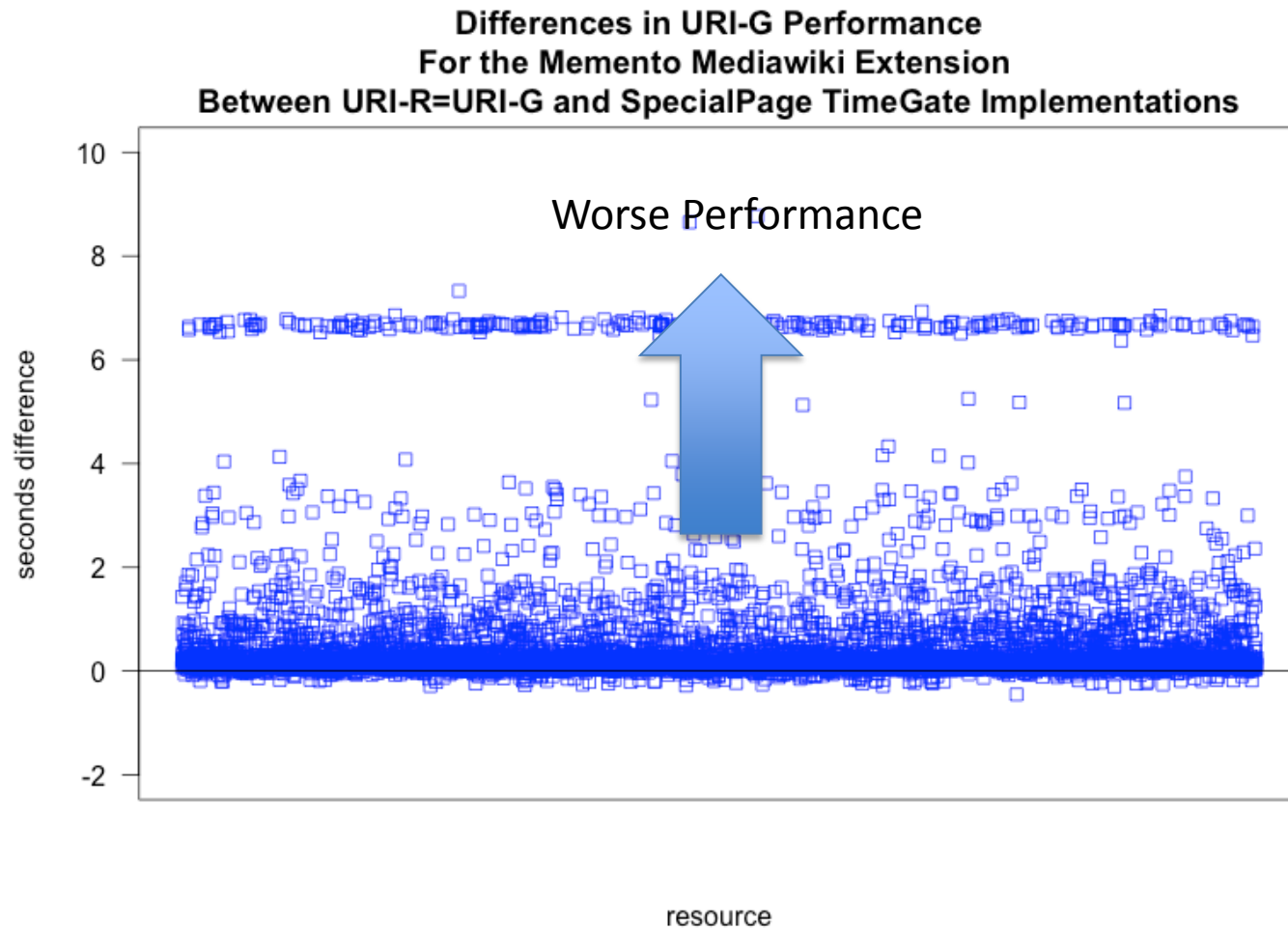
$$B < a + b + RTT_a$$

From these results:

$$0.22 \leq b \leq 1.75$$

$$0.56 \leq B \leq 12.06$$

Comparing TimeGate Implementations



Using Analysis We Worked To Obtain The Value Of RTT_a

Round Trip Time is the sum of transmission delay and propagation delay

$$RTT = d_t + d_p$$

Transmission delay is # of bits divided by the rate of transmission

$$d_t = \frac{N}{R}$$

Requests and responses are typically about 11,840 bits

Assuming a worst case of 1G telephony (28,000 bps), $d_t = 0.41$ s

Using our previous values for a , b , and B , we see that such a 1G user would need to experience a d_p of 0.13s for the two-request pattern to perform better.

Continuing Our Analysis We Obtained The Value Of RTT_a

0.13s sounds small, but at the speed of light, this would require the user to be 24,216.7 miles from the server

This is almost the circumference of the Earth!!!



So, At What Value Of d_t Does The Two-Request Pattern Win Out?

$$1.24 s < d_t + 0.1 s + 0.6 s$$

$$1.24 s < d_t + 0.7 s$$

$$0.54 s < d_t$$

$$d_t = \frac{N}{R} \text{ From (20)}$$

$$0.54 s = \frac{11840 b}{R}$$

$$(0.54 s)(R) = 11840 b$$

$$R = \frac{11840 b}{0.54 s} = 21926 \text{ bps}$$

At bandwidth less than 21,926 bps, the two-request pattern wins out

That's slightly better than 1G telephony!

For most users, the three-request pattern performs better!

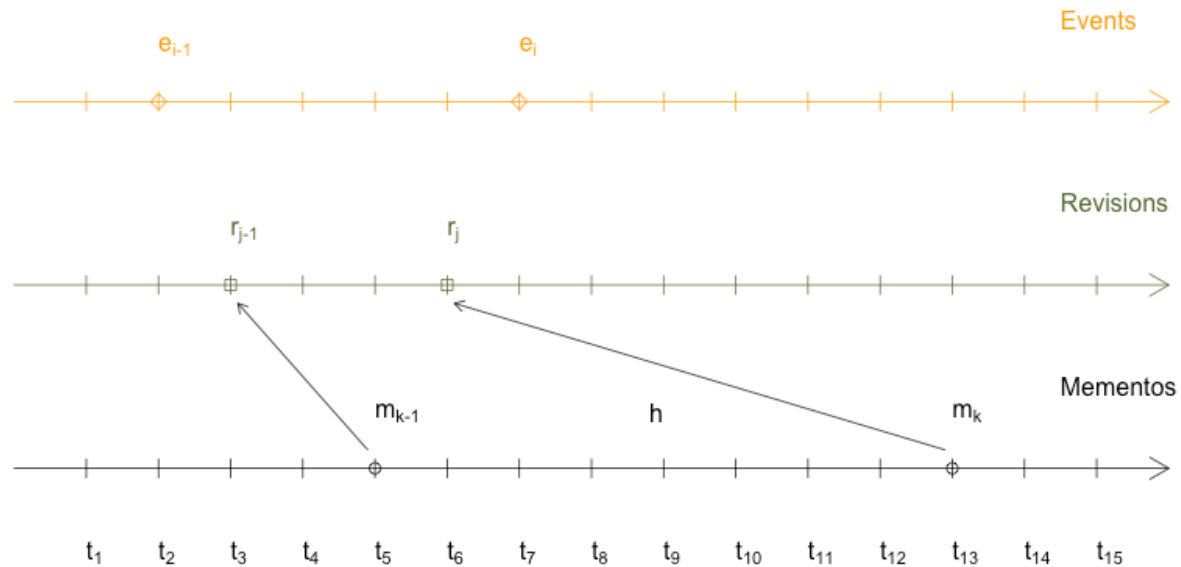
Backup Slides

ADDITIONAL ARCHIVE EXTANT SAFE AREAS

These Are Identified By The Order Of Occurrence Of Halfway, Revision, and Event

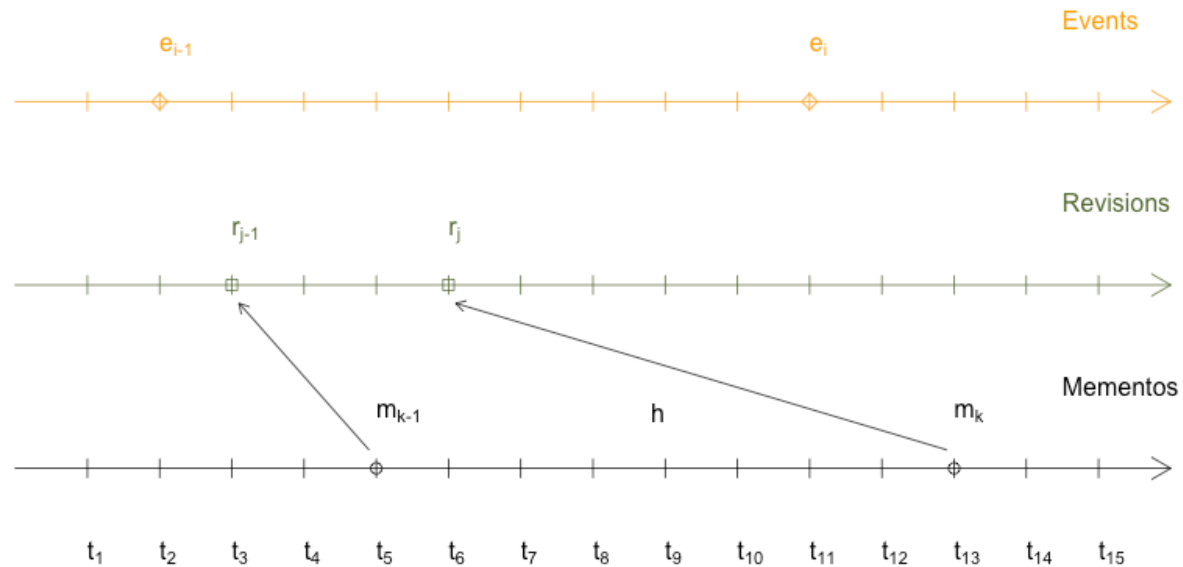
- For example
 - HRE – means:
 1. Halfway mark between two mementos
 2. Revision is created
 3. Event occurs
 - ERH – means:
 1. Event occurs
 2. Revision is created
 3. Halfway mark between two mementos

Condition: Archive Extant Safe Area REH



$$[t_s, t_f] = \mathcal{S}_b(e) = \begin{cases} (t_h, t_e) & \text{if } t_h < t_e < t_{r_i} \wedge r_j \equiv m_k \wedge \\ & t_h = \frac{t_{m_{k-1}} + t_{m_k}}{2} \\ (0, 0) & \text{otherwise} \end{cases}$$

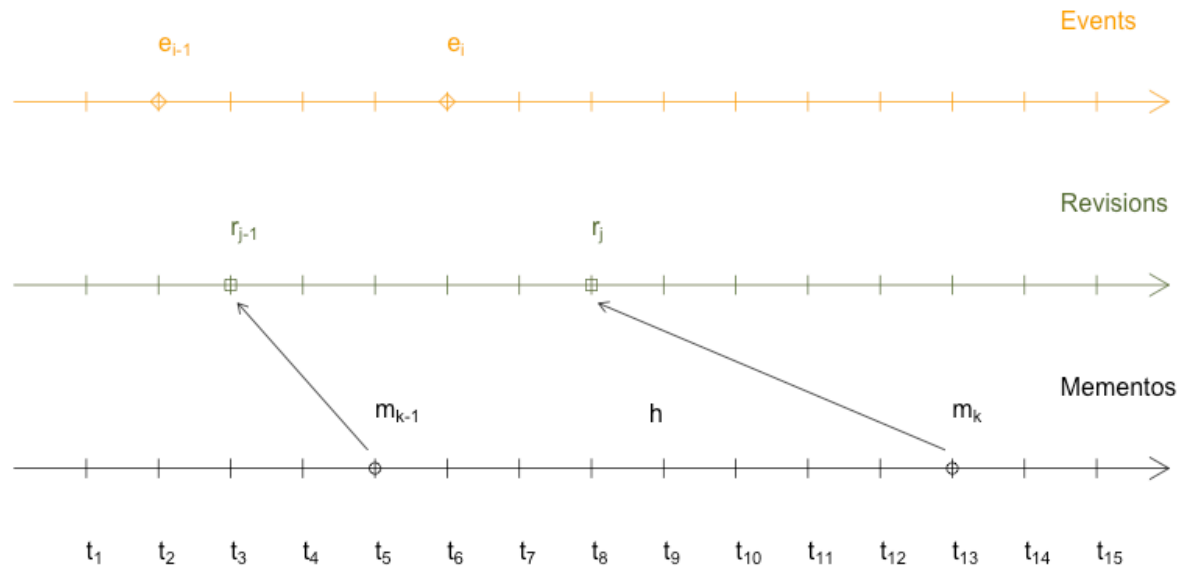
Condition: Archive Extant Safe Area RHE



$$[t_s, t_f] = \mathcal{S}_b(e) = \begin{cases} (t_h, t_e) & \text{if } t_h < t_e < t_{r_i} \wedge r_j \equiv m_k \wedge \\ & t_h = \frac{t_{m_{k-1}} + t_{m_k}}{2} \\ (0, 0) & \text{otherwise} \end{cases}$$

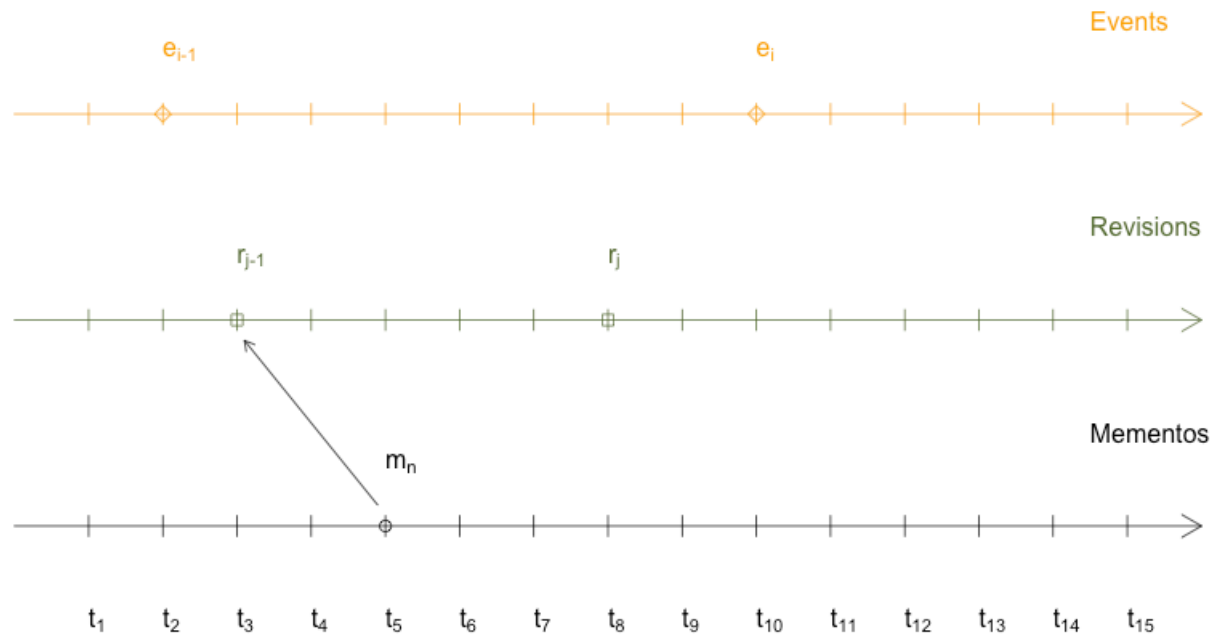
Condition: Archive Extant Safe Area

ERH



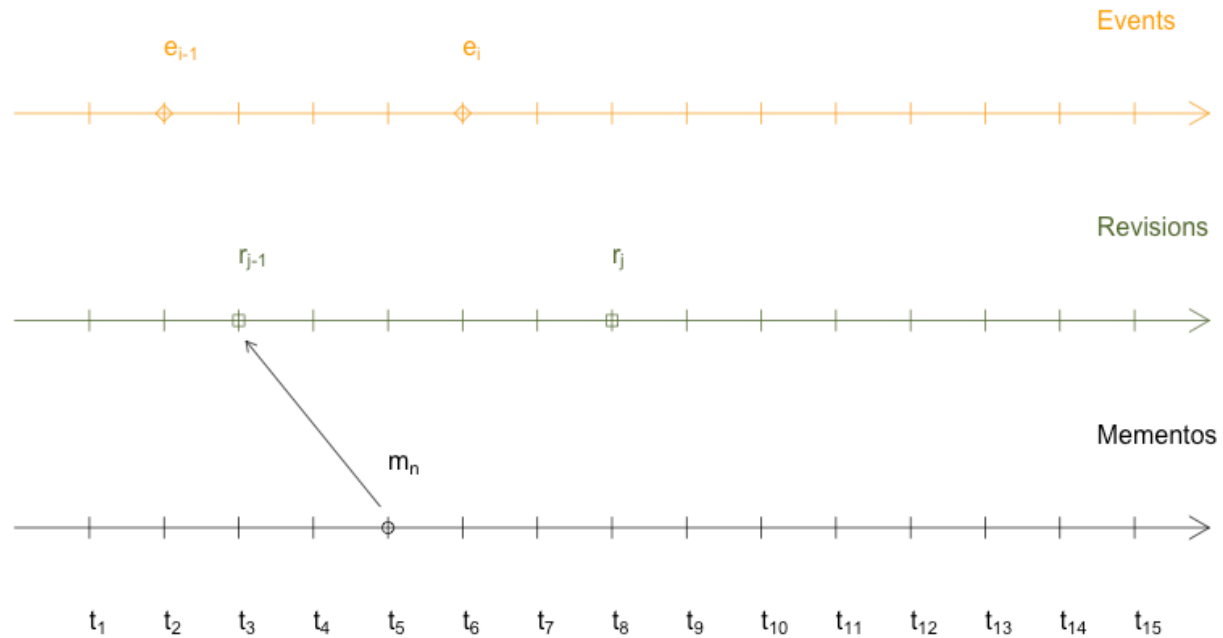
$$[t_s, t_f] = \mathcal{S}_b(e) = \begin{cases} (t_h, t_e) & \text{if } t_h < t_e < t_{r_i} \wedge r_j \equiv m_k \wedge \\ & t_h = \frac{t_{m_{k-1}} + t_{m_k}}{2} \\ (0, 0) & \text{otherwise} \end{cases}$$

Condition: Post Archive Safe Area RE



No spoilers after last memento m_n

Condition: Post Archive Safe Area ER

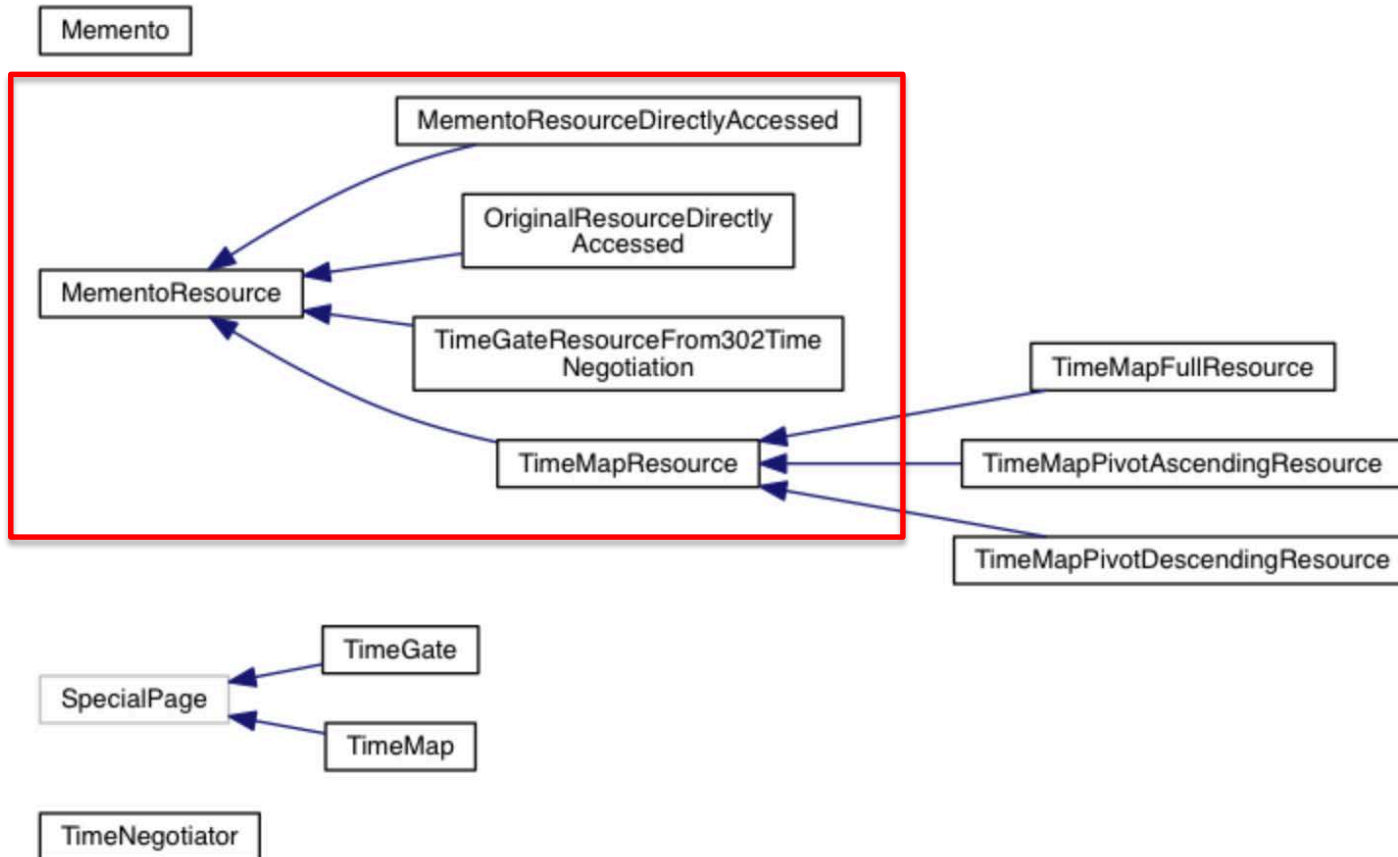


No spoilers after last memento m_n

Backup Slides

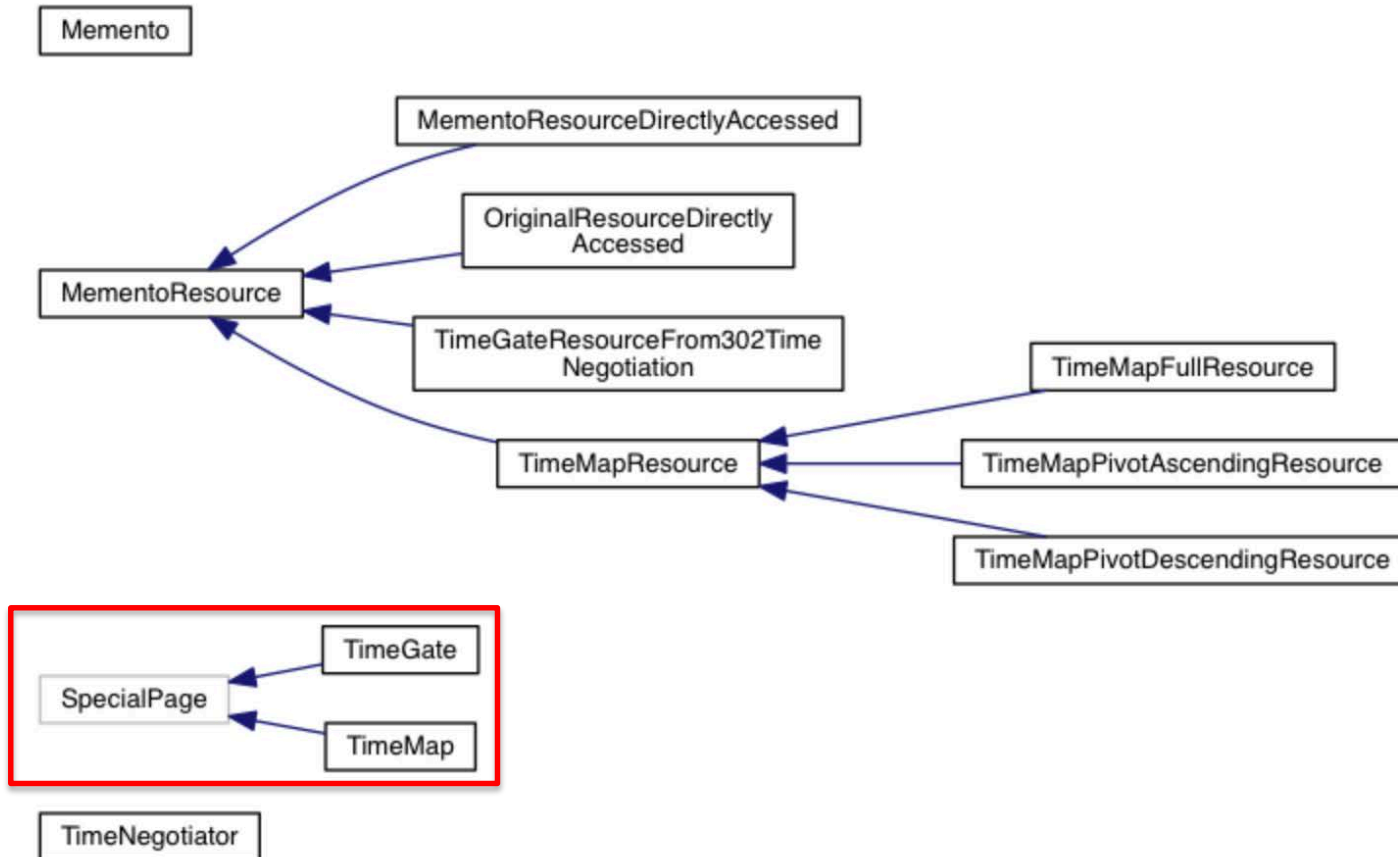
ARCHITECTURE OF THE MEMENTO MEDIAWIKI EXTENSION

We Used Class Inheritance For the Different Memento Resource Types



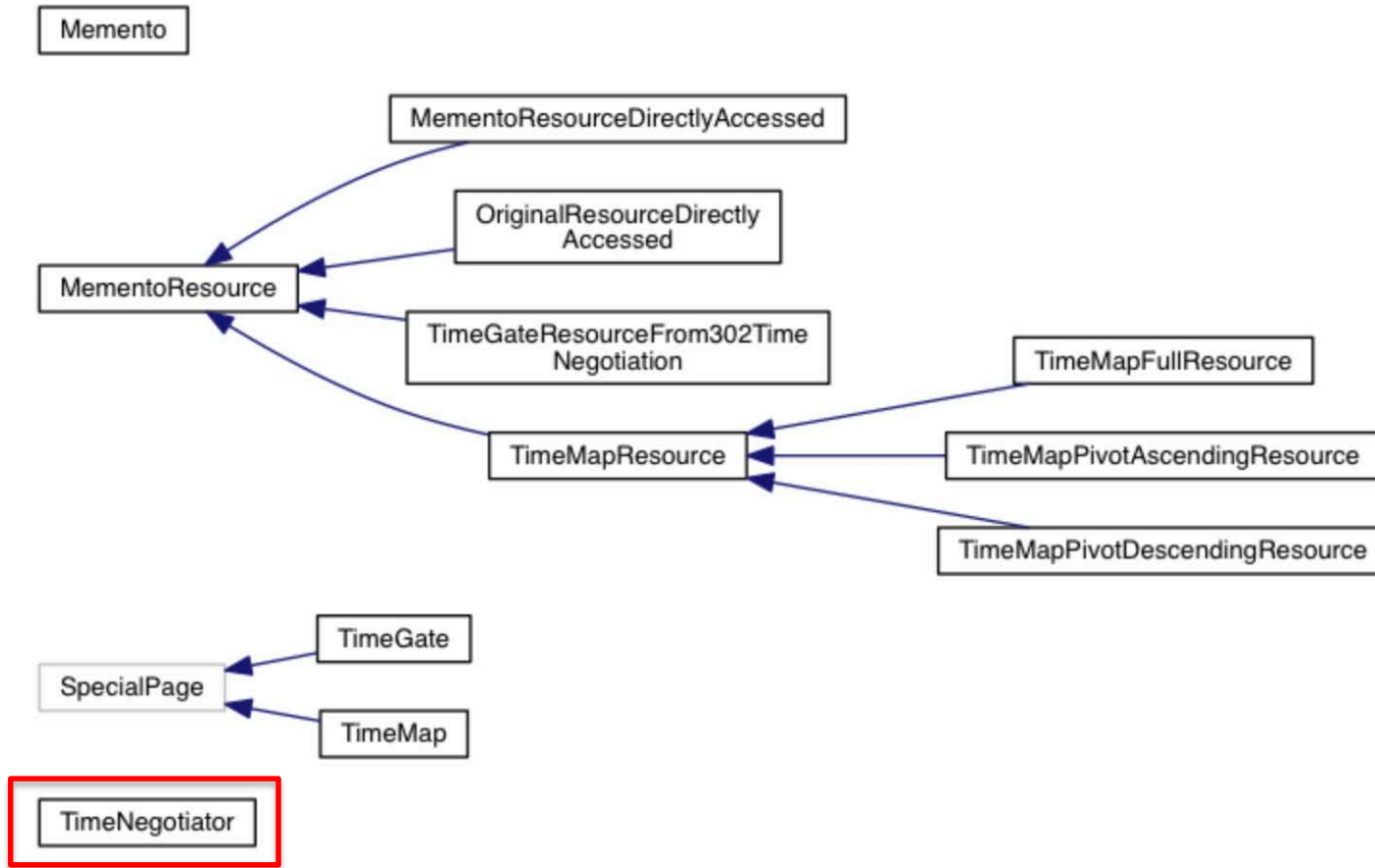
<http://www.mediawiki.org/wiki/Extension:Memento>

MediaWiki SpecialPages Invoke TimeGate And TimeMap Functionality



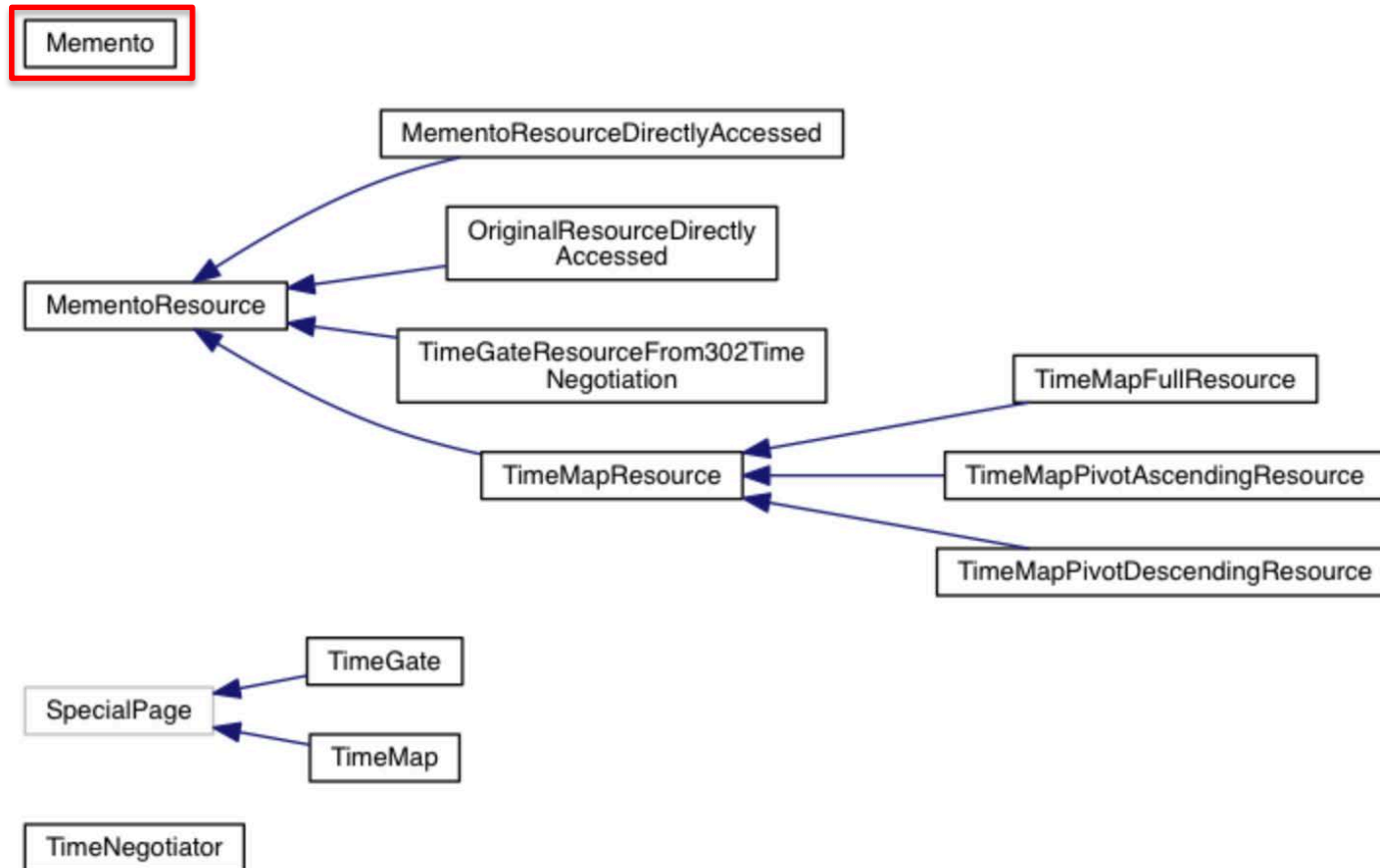
<http://www.mediawiki.org/wiki/Extension:Memento>

All Datetime Negotiation Is Centralized In The TimeNegotiator Class



<http://www.mediawiki.org/wiki/Extension:Memento>

The Memento Class Is The Entry Point For The Extension



<http://www.mediawiki.org/wiki/Extension:Memento>

Backup Slides

MISCELLANEOUS

MediaWiki Still Has CSS Issues

Template:Kings of Westeros

Revision as of 14:39, 27 May 2012 by [Dimadick](#) (Talk | contribs)
(diff) — Older revision | Latest revision (diff) | Newer revision → (diff)

 [Template](#) [Discussion](#) [Read](#) [View source](#) [View history](#)

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Kings of Westeros [hide]

<p>Navigation</p> <p>Main page</p> <p>Community portal</p> <p>Current events</p> <p>Recent changes</p> <p>Random page</p> <p>Help</p> <p>Targaryens</p> <p>Toolbox</p> <p>What links here</p> <p>Related changes</p> <p>Special pages</p> <p>Printable version</p> <p>Permanent link</p> <p>Page information</p>	<pre></div></pre> <table border="1"><tr><td style="background-color: #e6f2ff;">Holders of the iron Throne</td><td>Aegon I (1-37) · Aenys I (37-42) · Maegor I (42-48) · Jaehaerys I (48-103) · Viserys I (103-129) · Aegon II (129-131) · Aegon III (131-157) · Daeron I (157-161) · Baelor I (161-171) · Viserys II (171-172) · Aegon IV (172-184) · Daeron II (184-209) · Aerys I (209-221) · Maekar I (221-233) · Aegon V (233-259) · Jaehaerys II (259-262).</td></tr><tr><td style="background-color: #e6f2ff;">After Robb's Crowning</td><td>Oxcross · Ashemark · Crag · The Fords · Sack of Harrenhal · Duskendale · Ruby Ford · Harrenhal 2 · Red Wedding · Siege of Riverrun · Siege of Raventree</td></tr><tr><td style="background-color: #e6f2ff;">Ironborn Wars</td><td>Moat Cailin · Deepwood Motte · Stony Shore · Torrhen's Square · Winterfell (Theon) · Sack of Winterfell (Bolton) · Retaking of Torrhen's Square · Shield Islands</td></tr><tr><td style="background-color: #e6f2ff;">Stannis Wars</td><td>Storm's End · Battle of the Blackwater · Battle of Castle Black · Siege of Dragonstone · Siege of Winterfell</td></tr></table>	Holders of the iron Throne	Aegon I (1-37) · Aenys I (37-42) · Maegor I (42-48) · Jaehaerys I (48-103) · Viserys I (103-129) · Aegon II (129-131) · Aegon III (131-157) · Daeron I (157-161) · Baelor I (161-171) · Viserys II (171-172) · Aegon IV (172-184) · Daeron II (184-209) · Aerys I (209-221) · Maekar I (221-233) · Aegon V (233-259) · Jaehaerys II (259-262).	After Robb's Crowning	Oxcross · Ashemark · Crag · The Fords · Sack of Harrenhal · Duskendale · Ruby Ford · Harrenhal 2 · Red Wedding · Siege of Riverrun · Siege of Raventree	Ironborn Wars	Moat Cailin · Deepwood Motte · Stony Shore · Torrhen's Square · Winterfell (Theon) · Sack of Winterfell (Bolton) · Retaking of Torrhen's Square · Shield Islands	Stannis Wars	Storm's End · Battle of the Blackwater · Battle of Castle Black · Siege of Dragonstone · Siege of Winterfell
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Stannis Wars	Storm's End · Battle of the Blackwater · Battle of Castle Black · Siege of Dragonstone · Siege of Winterfell								

Other Uses For The Memento MediaWiki Extension

Same-sex marriage law in the United States by state

From Wikipedia, the free encyclopedia

This article may require cleanup to meet Wikipedia's quality standards. The specific problem is: **Formatting and content layout in many sections does not follow WP:MOS. Please help improve this article if you can.** (April 2013)

This article summarizes the laws of U.S. states and other jurisdictions regarding same-sex marriage.

Contents [hide]

- 1 States
- 1.1 Alabama
- 1.2 Alaska
- 1.3 Arizona
- 1.4 Arkansas
- 1.5 California
- 1.6 Colorado
- 1.7 Connecticut
- 1.8 Delaware
- 1.9 Florida
- 1.10 Georgia
- 1.11 Hawaii
- 1.12 Idaho
- 1.13 Illinois
- 1.14 Indiana
- 1.15 Iowa
- 1.16 Kansas
- 1.17 Kentucky
- 1.18 Louisiana
- 1.19 Maine
- 1.20 Maryland
- 1.21 Massachusetts
- 1.22 Michigan
- 1.23 Minnesota

State laws regarding same-sex partnerships in the United States*

- Same-sex marriage allowed¹
- Domestic partnerships or civil unions granting privileges similar to marriage for same-sex domestic partners²
- Limited/numerated privileges granted by state
- Same-sex marriage performed elsewhere recognized
- No prohibition or recognition of same-sex marriage or unions in territory law
- Judicial ruling against a same-sex marriage ban stayed pending appeal³
- State bans same-sex marriage
- Constitution and statute ban same-sex marriage⁴
- Constitution and statute ban same-sex marriage and some or all other same-sex unions

Evolving laws and legal discourse

Changing relationship between organizations (ICANN vs. Verisign)

Past software contributions (Folding@Home)

ICANNWiki

the independent, collaborative resource for the ICANN community

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Community portal
Recent changes
Random page

Platinum Sponsor
Verisign
Neustar

Gold Sponsors

Silver Sponsor

Bronze Sponsors

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Verisign

Verisign is an Internet infrastructure service provider. It is based in Reston, VA and was founded in 1995. The company has offices around the world, in Virginia, California, Washington D.C., India, Brazil, China, Australia, Switzerland, and the UK.

Its registry services include operating the authoritative directory for the following TLDs:

- .com
- .net
- .cc
- .tv
- .name
- .jobs
- .edu
- .gov

Verisign runs two of the world's thirteen root servers: a.root-servers.net and j.root-servers.net, which are considered national IT assets by the U.S. Federal government.^[1] Verisign's average daily Domain Name System (DNS) query load for the first quarter of 2012 was 66 billion, with a peak of 74 billion; this represents a daily average increase of 4 percent over the previous quarter, while the peak decreased 37 percent.^[2]

Third Party Contributions

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- Random page
- Help
- Forum
- Mailing List
- Multi Search

Search: [Go] [Search]

Toolbox: What links here, Related changes, Special pages, Printable version, Permanent link

More 3rd party FAH tools can be found at Folding Forum's Tools List ☺

Contents [hide]

- 1 Stats Pages
- 2 Monitors
- 3 Installers
- 4 Other

Stats Pages

3rd Party Stats Pages are often available when the Stanford Stats are Updating. They also can include more detailed in production levels

- Kakao Stats ☺ - Includes all teams and users. (Updates every 3 hours)
- Extreme Overclocking ☺ - Includes the 6,000 Highest Ranked Teams & All Team Members (Updates every 3 hours)
- Free OC ☺ - Includes all teams and users.
- HardOCP ☺ - Stats for the 2,000 Highest Ranked Teams & All Team Members (Updates every 3 hours)
- XCPLUS ☺ - Stats for Teams and users (Updates every hour)

Memento Headers Extension

