Editing 2.0

MediaWiki's upcoming visual editor and the future of templates

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Part I: Editing

So pretty!

Israel

From Wikipedia, the free encyclopedia

Coordinates: 31°N 35°E

This article is about the modern country. For other uses, see Israel (disambiguation).

The **State of Israel** (Hebrew: מְדִינַת יִשְׂרָאֵל (help·info), *Medīnat Yisrā'el*; Arabic: دَوْلَة إِسْرَائِيل, *Dawlat 'Isrā'īl*), is a parliamentary republic in Western Asia, located on the eastern shore of the Mediterranean Sea. It borders Lebanon in the north, Syria in the northeast, Jordan and the West Bank in the east, Egypt and the Gaza Strip on the southwest, and contains geographically diverse features within its relatively small area.[6][7] Israel is the world's only Jewish-majority state,[8] and is defined as a Jewish and democratic state in its Basic Laws.

Following the 1947 United Nations decision to partition Palestine, on 14 May 1948 David Ben-Gurion, the Executive Head of the World Zionist Organization[9] and president of the Jewish Agency for Palestine, declared Israel a nation independent from the British Mandate of Palestine.[10][11] Neighboring Arab states invaded the next day in support of the Palestinians. Since then, Israel has fought a series of wars with neighboring Arab states,[12] and has occupied territories, including the West Bank, Sinai Peninsula, Gaza Strip and the Golan Heights, beyond those delineated in the 1949 Armistice Agreements. Portions of these territories, including Jerusalem, have been annexed by Israel but the border with the neighboring West Bank is still not formally defined, as a result of the complex and unresolved political situation.[13][14][15][16][17] Israel has signed peace treaties with Egypt and Jordan, but efforts by elements on both sides of the Israeli–Palestinian conflict to solve the problem diplomatically have so far met with little or no success. Israel Prime Minister Yitzhak Rabin pushed for a two-state solution in the 1990s, but was assassinated by a Jewish nationalist.[18]

The population of Israel, defined by the Israel Central Bureau of Statistics to include all citizens or nationals, but not foreign workers, within Israel itself and in the Israeli settlements in the occupied territories, was estimated in June 2011 to be 7,751,000 people,[19] of whom 5,818,200 are Jewish.[19][20][21] Arab citizens of Israel form by far the country's second-largest ethnic group, which includes Muslims and Christians. Other minorities are Druze, Circassians and Samaritans. According to the May 2010 population estimate, including 300,000 "non-citizen" Arabs living in East Jerusalem and the Golan Heights, these minorities number 1,579,700.[19]

Israel is a developed country and a representative democracy with a parliamentary system and universal suffrage.[22][23] The Prime Minister serves as head of government and the Knesset serves as Israel's unicameral legislative body. The economy, based on the nominal gross domestic product, was the 42nd-largest in the world in 2010[4] and it has one of the highest life expectancies in the world.[24] Jerusalem is the country's capital, although it is not

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Dawlat Isrā'īl

Flag | Emblem

Anthem:

Hatikvah (הַתִּקְוָה)

Capital (and largest city): Jerusalem[a] 31°47′N 35°13′E

Wikipedia articles can include rich formatting, beyond simple links and images to complex templates to generate tables, pronunciation guides, and all sorts of details.

So icky!

```
{{About|the modern country}}
{{pp-move-indef}}{{pp-semi-indef}}
{{Infobox Country
|native_name = מְדִינַת יִשְׂרָאֵל <br />''Medīnat Yisrā'el''<br />دَوْلَة إِسْرَائِيل <br />''Dawlat Isrā'īl''
|conventional_long_name = State of Israel
|common_name = Israel
|image_flag = Flag of Israel.svg
|alt_flag = A white flag with horizontal blue bands close to the top and bottom, and a blue star of David in the
middle
|image_symbol = Coat of arms of Israel.svg
|symbol_type = Emblem
|image_map = LocationIsrael.svg
|map_caption =
|national_anthem = <center>[[File:Hatikvah instrumental.ogg]]</center><br>[[Hatikvah]] ('''הַתִּקְוָה''')
|official_languages = [[Hebrew language|Hebrew]], [[Arabic language|Arabic]]<ref name="cia"/>
|ethnic_groups = 75.3% [[Jews|Jewish]]<br />20.5% [[Arab people|Arab]]<br />4.2%  other<ref name=cbs92011>{{cite
news|url=http://www.ynet.co.il/articles/0,7340,L-4066153,00.html |title=63 to Israel: Population of Israel
|publisher=Ynet! |date=8 May 2011 |accessdate=8 May 2011}}</ref>
|demonym = Israeli
|capital = [[Jerusalem]]{{Ref label|capital-disp|a|}}<br /><small>{{Coord|31|47|N|35|13|E}}</small>
|largest_city = capital
|<span style="color:blue;">Largest urban agglomeration</span> = [[Tel Aviv|Tel Aviv-Yafo]]
{{Coord|32°|5'0|"N|34°|48'0|"E}}</small>
|government_type = [[Parliamentary democracy]]<ref name="cia"/>
|leader_title1 = [[President of Israel|President]]
|leader_name1 = [[Shimon Peres]]
|leader_title2 = [[Prime Minister of Israel|Prime Minister]]
|leader_name2 = [[Benjamin Netanyahu]]
|leader_title3 = [[List of Knesset speakers|Knesset Speaker]]
|leader_name3 = [[Reuven Rivlin]]
|leader_title4 = [[Supreme Court of Israel#Presidents|Supreme Court President]]
|leader_name4 = [[Dorit Beinisch]]
|legislature = [[Knesset]]
|sovereignty_type = [[Independence]]
|sovereignty_note = from [[British Mandate for Palestine]]
|established_event1 = [[Israeli Declaration of Independence|Declaration]]
|established_date1 = May 14, 1948
```

But when you push that “edit” button, you often come face to face with a giant blob of markup that’s very hard to read. Here we can’t even see the first paragraph of the article until we scroll past several pages of infobox setup.

Climate

Temperatures in Israel vary widely, especially during the winter. The more mountainous regions can be windy, cold, and sometimes snowy; Jerusalem usually receives at least one snowfall each year.[1] Meanwhile, coastal cities, such as Tel Aviv and Haifa, have a typical Mediterranean climate with cool, rainy winters and long, hot summers. The area of Beersheba and the Northern Negev has a semi-arid climate with hot summers, and cool winter but with fewer rainy than the Mediterranean climate. The Southern Negev and the Arava areas have Desert climate with very hot and dry summers, and mild winters with few days of rain. The highest temperature in the continent of Asia (53.7 °C/128.7 °F) was recorded in 1942 at Tirat Zvi kibbutz in the northern Jordan river valley.[2]

From May to September, rain in Israel is rare.[3][4] With scarce water resources, Israel has developed various water-saving technologies, including drip irrigation.[5] Israelis also take advantage of the considerable sunlight available for solar energy, making Israel the leading nation in solar energy use per capita (practically every house uses solar panels for water heating).[6]

Forest around the Ein Karem village, Jerusalem.

```
===Climate===
[[File:EinkaremvillageC.jpg|thumb|Forest around the Ein Karem village, Jerusalem.]]

Temperatures in Israel vary widely, especially during the winter. The more mountainous regions can be windy, cold,
and sometimes snowy; [[Jerusalem]] usually receives at least one snowfall each year.<ref>
{{harvnb|Goldreich|2003|p=85}}</ref> Meanwhile, coastal cities, such as [[Tel Aviv]] and [[Haifa]], have a typical
[[Mediterranean climate]] with cool, rainy winters and long, hot summers. The area of [[Beersheba]] and the Northern
Negev has a [[semi-arid climate]] with hot summers, and cool winter but with fewer rainy than the Mediterranean
climate. The Southern Negev and the Arava areas have [[Desert climate]] with very hot and dry summers, and mild
winters with few days of rain. The highest temperature in the continent of Asia ({{convert|53.7|°C|°F|disp=s|lk=on}})
was recorded in 1942 at [[Tirat Zvi]] kibbutz in the northern Jordan river valley.<ref name=watzman>{{Citation |last
= Watzman |first = Haim |title = Left for dead |accessdate = 29 July 2008 |date = 8 February 1997 |url =
http://environment.newscientist.com/article/mg15320684.400-left-for-dead--plans-to-rescue-the-rapidly-shrinking-
dead-sea-may-be-good-news-forindustry-and-tourists-but-the-strange-life-forms-that-thrive-in-its-supersaltywaters-
still-face-a-perilous-future-says-ithaim-watzmanit.html}}</ref>
```

Even fairly straightforward paragraphs start to blur together when you break out the source. The markup is often non-obvious; features that are clearly visible in the rendered view like links and images don't stand out in the source view, and long inline citations and such can make it harder to find the actual body text you wanted to edit.

RTL WTF?

```
לפי נתוני [[הלשכה המרכזית לסטטיסטיקה]] בשנת [[2009]] (בסוגריים:
[[2007]])<ref>[[הלשכה המרכזית לסטטיסטיקה]], http://www.cbs.gov.il
/reader/newhodaot/hodaa_template.html?hodaa=201119012 הסקר החברתי 2009
- האוכלוסייה היהודית: מקומה של הדת בחיים הציבוריים בישראל]</ref
>>השנתון הסטטיסטי לישראל 2007, מספר 58 פרק 7, מספר לוח 4</ref>, על
פי הגדרתם העצמית של בני 20 ומעלה, חלוקת האמונה בקרב האוכלוסייה היהודית
היא כדלהלן:

* 42% (45%) [[חילוניים]]
* 38% (38.3%) [[מסורתיים]]<ref>"מסורתי דתי" או "מסורתי לא כל כך
דתי"/></ref
* 12% (9.8%) [[דתיים]]
* 8% (6.7%) [[חרדים]].
```

As many of you here today will be well aware, the way our markup displays in a raw text editor can also be really problematic for right-to-left scripts like Hebrew and Arabic. It's very easy to get lost about whether you've opened or closed some tag, or whether your list item is starting at the beginning of a line. Without control over the individual pieces, we can't give any hints to the text editor.

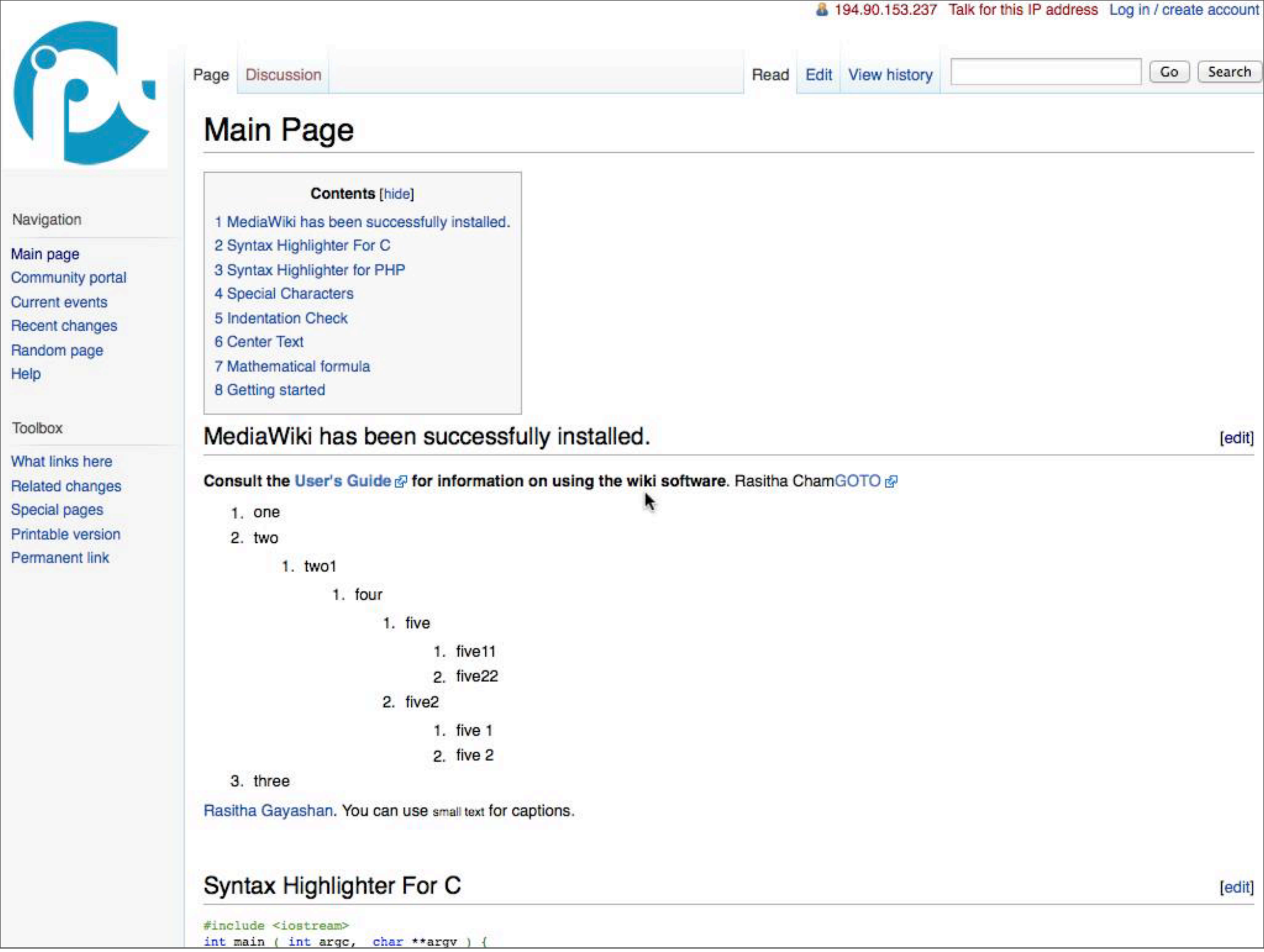
RTL A-OK

לפי נתוני הלשכה המרכזית לסטטיסטיקה בשנת 2009 (בסוגריים: 2007)[1][2], על פי הגדרתם העצמית של בני 20 ומעלה, חלוקת האמונה בקרב האוכלוסייה היהודית היא כדלהלן:

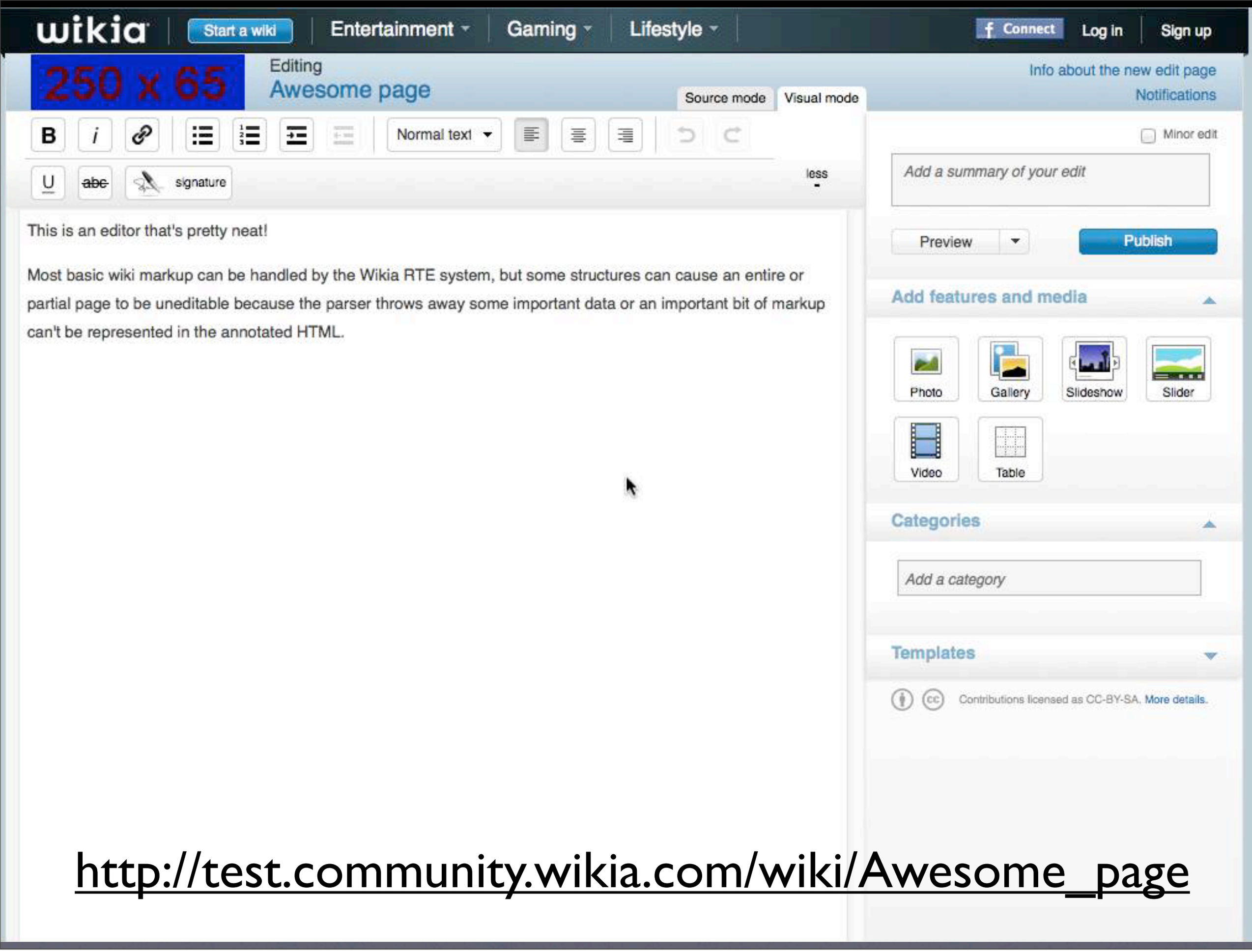
- 42% (45%) חילוניים
- 38% (38.3%) מסורתיים[3]
- 12% (9.8%) דתיים
- 8% (6.7%) חרדים.

1. ^ הלשכה המרכזית לסטטיסטיקה, הסקר החברתי 2009 - האוכלוסייה היהודית: מקומה של הדת בחיים הציבוריים בישראל
2. ^ השנתון הסטטיסטי לישראל 2007, מספר 58 פרק 7, מספר לוח 4
3. ^ "מסורתי דתי" או "מסורתי לא כל כך דתי"

The same text rendered as structured HTML doesn't have these problems; bullets stay on the right side of their text, and reference citations are distinct entities. If we could edit directly in this view, we'd save ourselves a lot of aggravation!

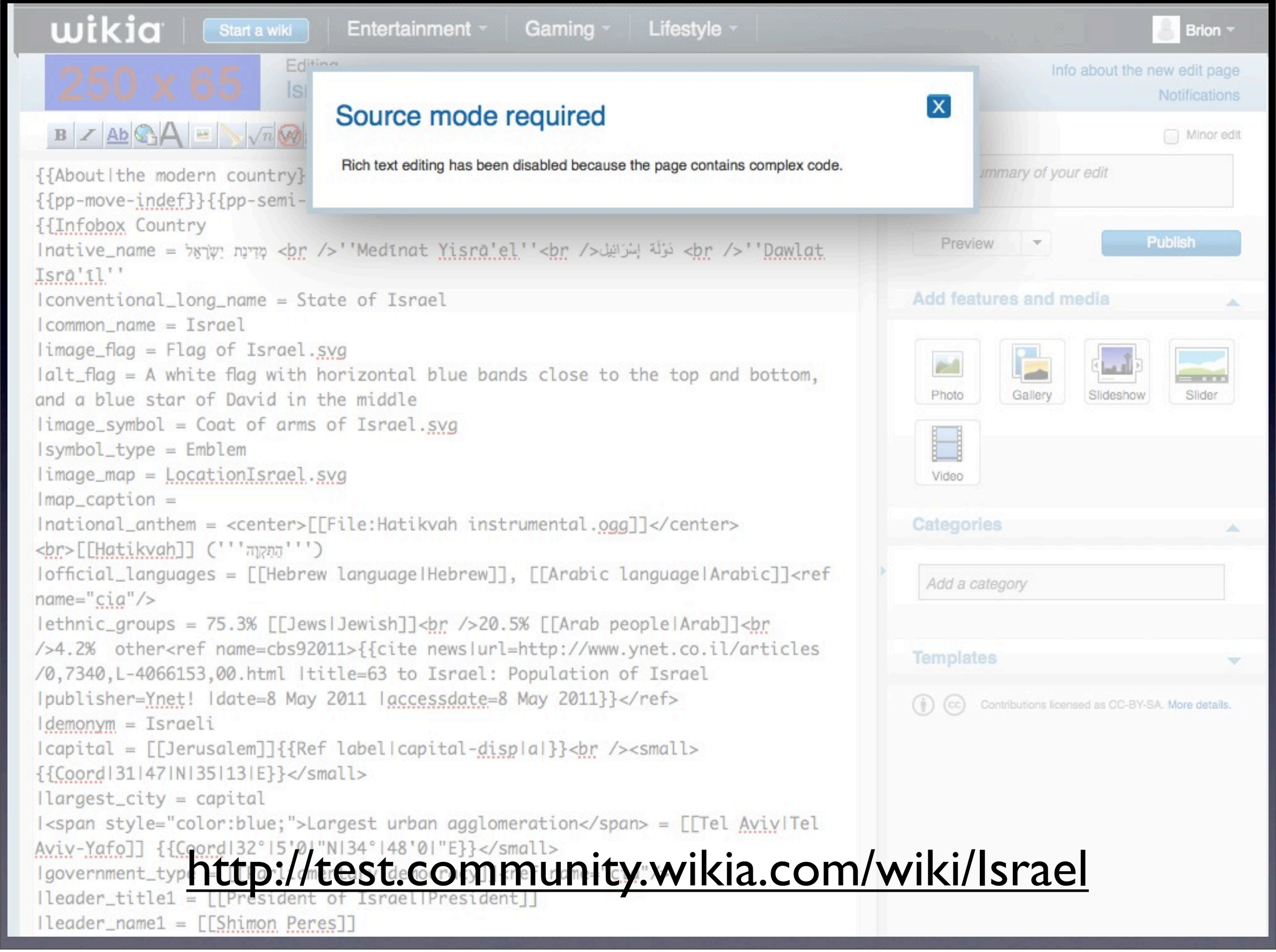


JanPaul Posma's InlineEditor extension is an excellent example of work on making it easier to edit smaller pieces of a page, making the amount of other markup around you less intimidating. Though each piece is still edited as raw markup, you're only exposed to the parts you're working with, and you can switch them back to visual mode very quickly. Unfortunately he couldn't make it here to make his own presentation, but his thesis paper is available online and will be good reading for some of us folks. :) One of the trickiest bits of implementation is figuring out which HTML maps to which source, and consistently mapping it back in after editing.



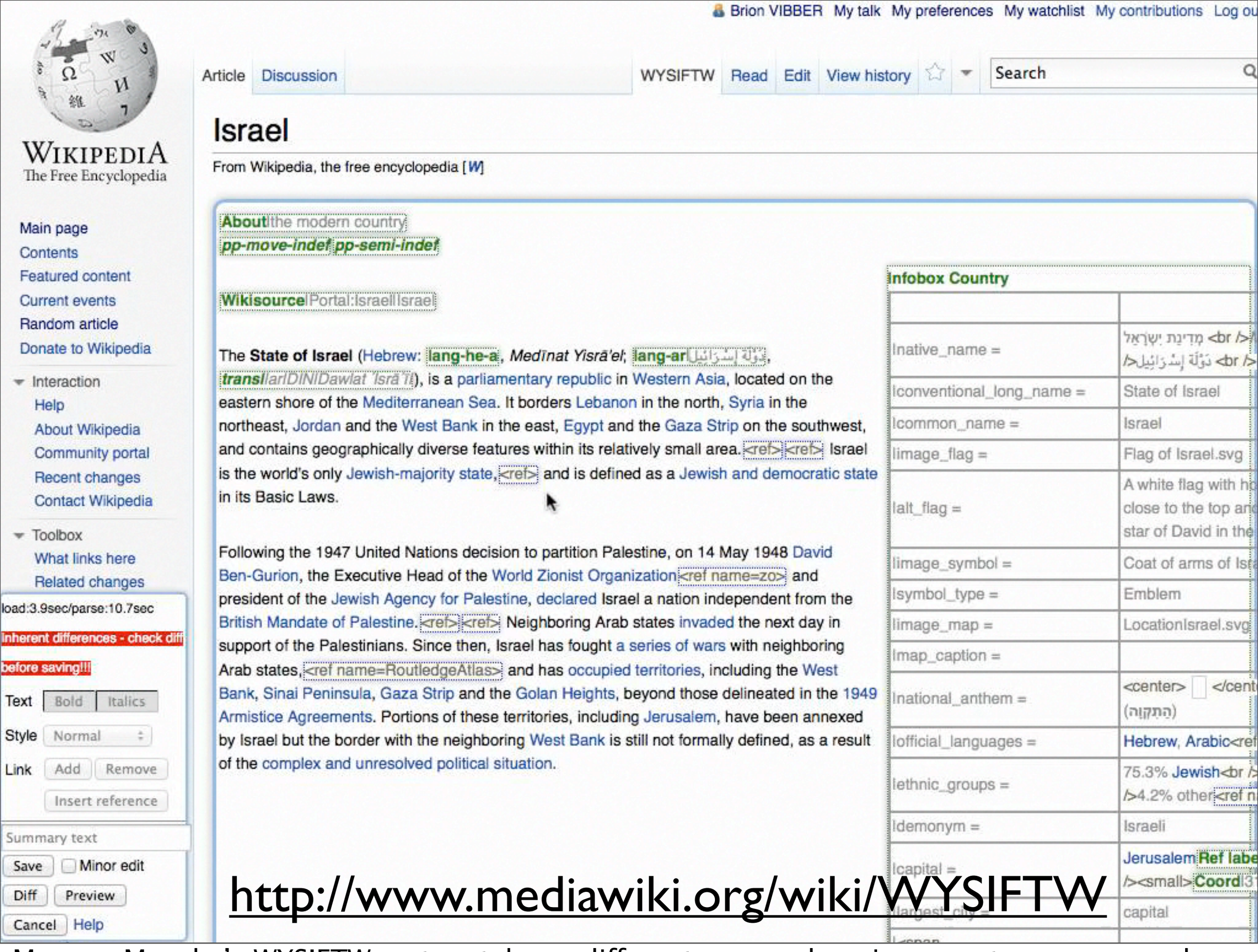
http://test.community.wikia.com/wiki/Awesome_page

Wikia's rich-text editor plugin, which has been running in production on many of Wikia's newer sites for a while, modifies MediaWiki's existing parser to add some structural metadata. This allows a rendered view to be edited quite nicely in an HTML editor extending FCKEditor, then translated back to wiki markup for saving.



http://test.community.wikia.com/wiki/Israel

But the complexity and fragility of the current parser makes this error-prone; some structures can't be represented in the HTML output, forcing a fallback to plain-text editing for markup seen in many Wikipedia articles. Wikia has been hitting against the difficulties of maintaining this system further, and has already leant one of their engineers to the R&D stage of our new editor project to ensure that we can share a common next-generation visual editor.



http://www.mediawiki.org/wiki/WYSIFTW

Magnus Manske's WYSIFTW system takes a different approach, using a custom parser and producing a view of the page that's explicitly tailored for editing. Comments are visible, complex templates and references are folded by default but can be expanded, and infobox templates are presented as sort of editable data tables. While the current proof of concept doesn't scale well to large pages, there are a lot of ideas we expect to lift directly from it such as a slightly-different editing-oriented view and explicit support for editing template usages.

So what are we going to make for you?

Simple examples [edit]

A simple recursive function:

```
function factorial(n) {
    if (n == 0) {
        return 1;
    }
    return n * factorial(n - 1);
}
```
[edit]

A simple personalised greeting script:

```
var name = prompt("What is your name?");
alert("Welcome " + name);
```
[edit]

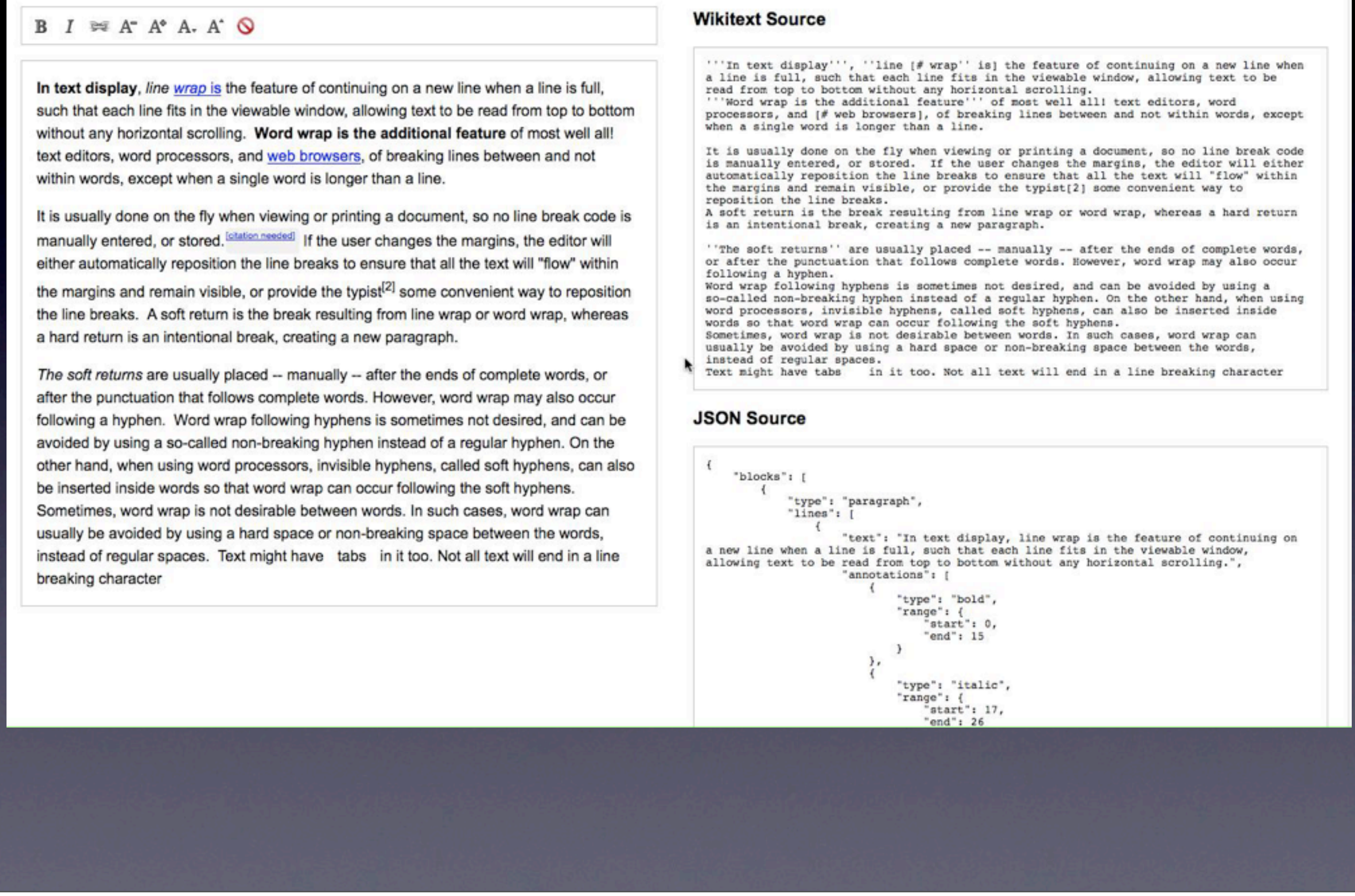
Anonymous function (or lambda) syntax:

```
function add(i, j) {
    var addLambda = function(x, y) {
        return x + y;
    };

    return addLambda(i, j);
}
```
[edit]

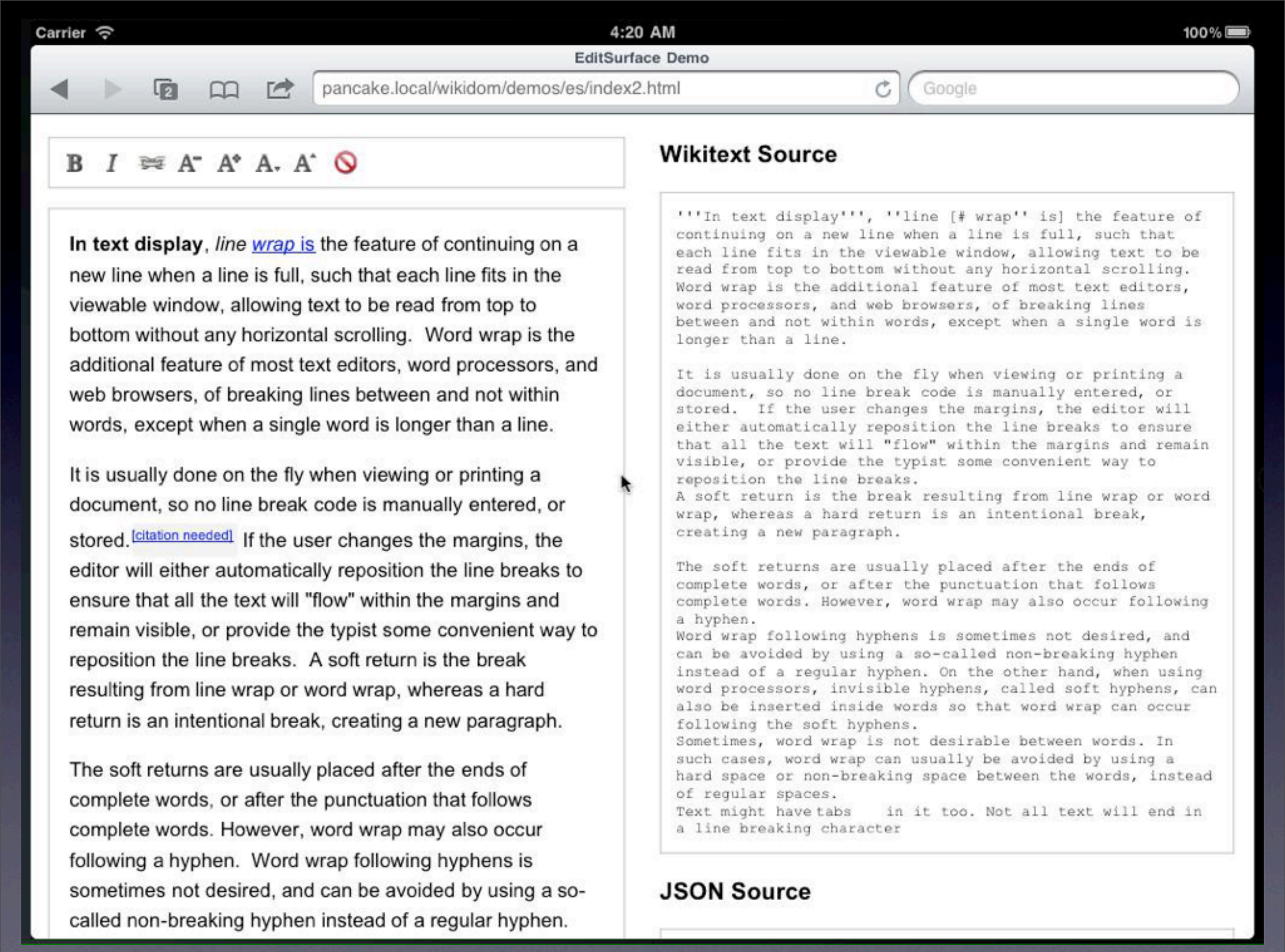
Closures:

```
function displayClosure() {
    var inc = makeIncreaser(1);

    inc(); // returns 1
    inc(); // returns 2
    inc(); // returns 3
}

function makeIncreaser(init) {
    var count = init;
```
[edit]

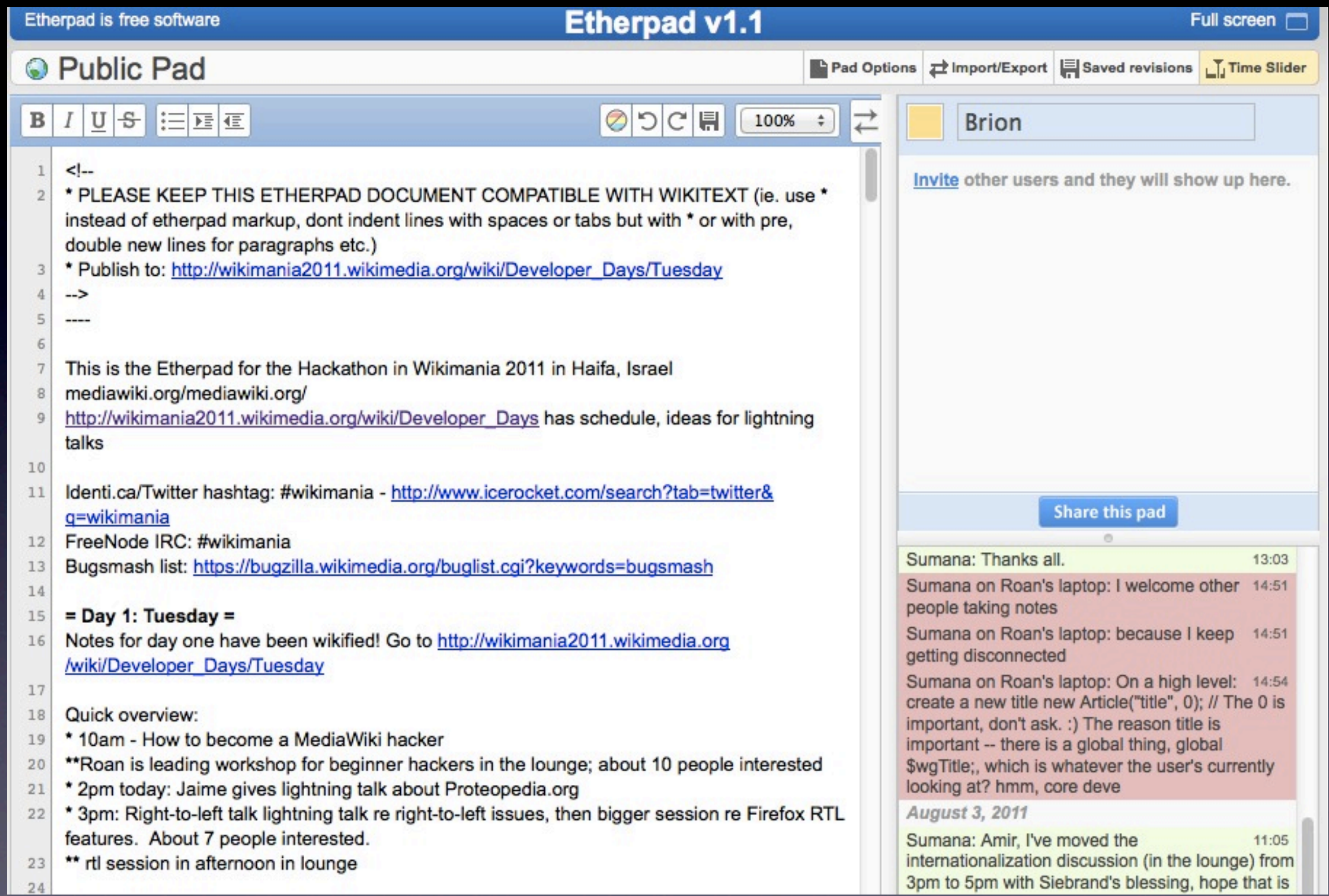
We'd love to combine the "best of both worlds" of WYSIWIG and locality-based editing. If the rendered page and editing system understand the document structure, we jump straight into a table cell, template, or special markup construct and just start editing it in-place. This is a demo I whipped up embedding a syntax-highlighting code editor to modify source code examples inline on a fully rendered article -- alas it doesn't yet know how to actually save. :)



Wikimedia's Trevor Parscal and Wikia's Inez Korczynski have been working on an editing surface that handleslayout, typing, and cut-n-paste details in a more hands-on way than many other editors that simply build on browsers' basic HTML edit area support. This lets the editor understand a custom document structure natively, which can be mapped back to the original wikitext source.

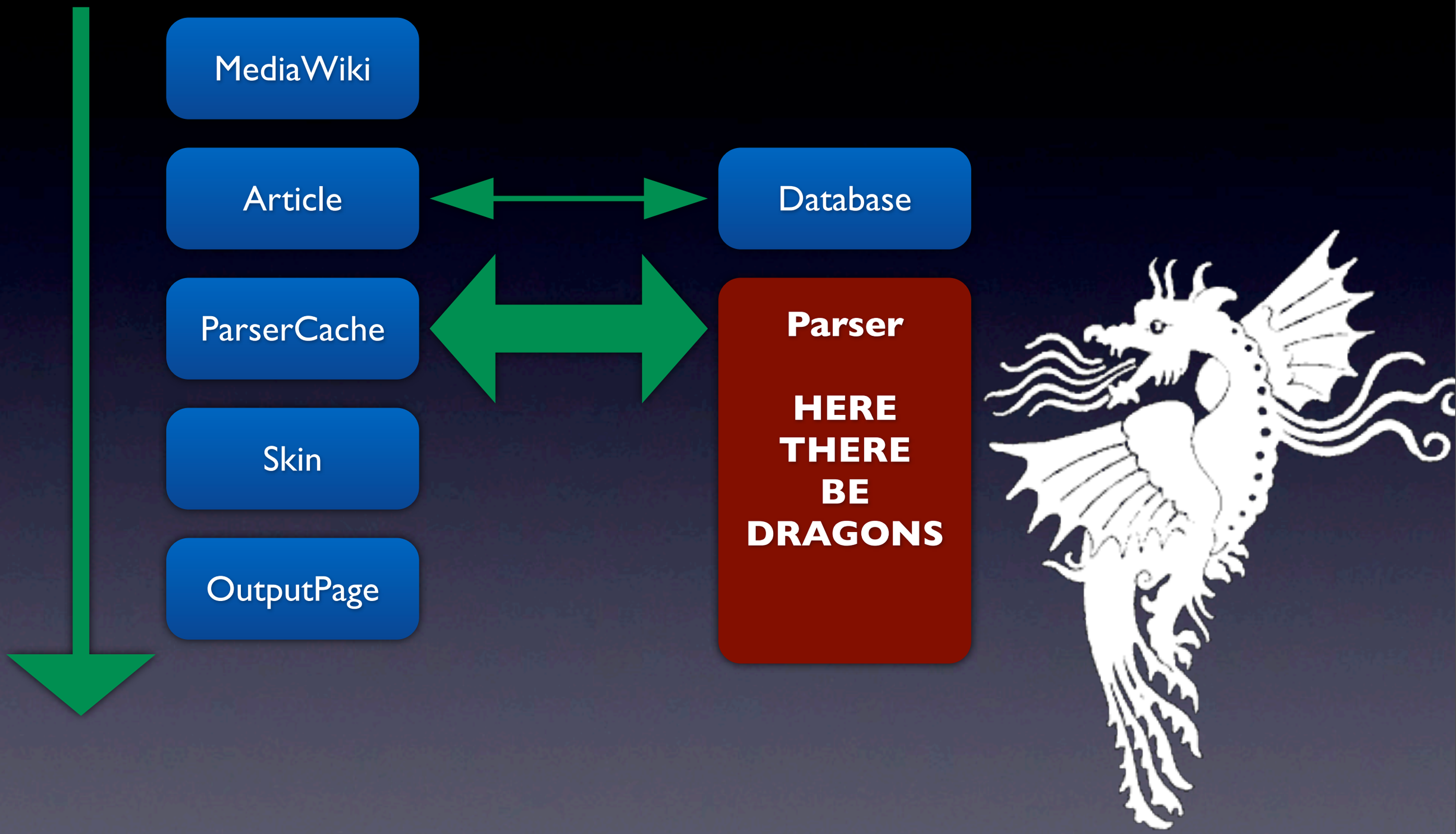


Another advantage is that, unlike systems building on browsers' content-editable system, this works on mobile browsers like iOS and Android devices that have traditionally not handled wysiwig editing on the web well. With mobile as a key outreach priority, the possibility of an attractive mobile-optimized editing view for smartphones -- which will soon be a huge portion of all phones -- has obvious good points.



Another thing we're trying to bake into the editor is infrastructure to support multiuser editing. In the Wikimedia community & staff alike we've found a huge usefulness to using tools like Etherpad to let multiple people work on shared notes at the same time... but we then have to copy them over to a wiki manually, or keep the separate links around. Neil Kandalgaonkar's been experimenting with embedding Etherpad as a plugin as a temporary solution, and ensuring that the editor's internal structures are suitable for the same kind of multiuser updates and transactional reordering that will let us extend from a single user with an undo stack to multiple users editing together.

Part II: Parser

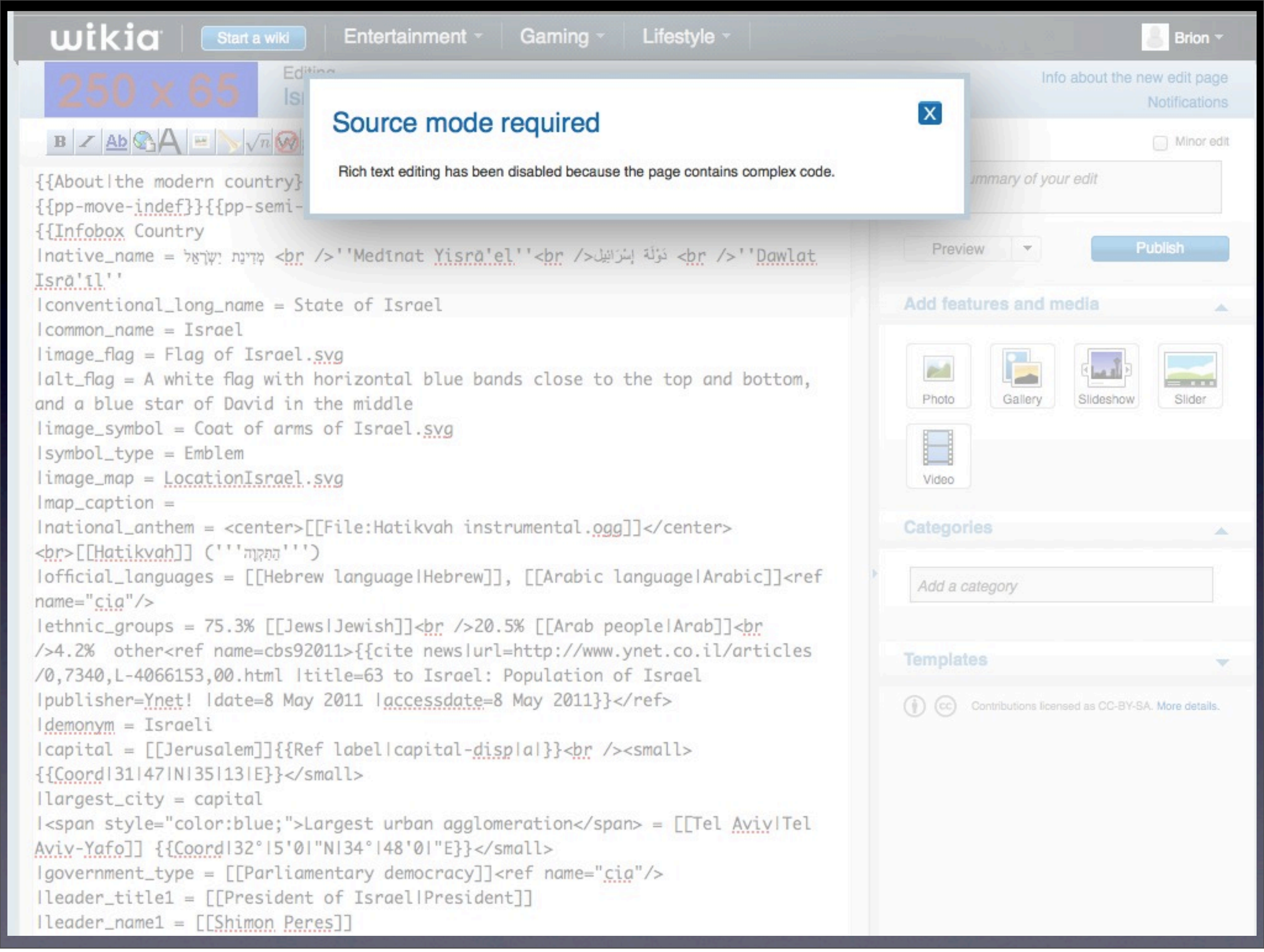


http://commons.wikimedia.org/wiki/File:Drake_p%C3%A5_en_medeltida_v%C3%A4vnad,_Nordisk_familjebok.png

So what is the parser? IT'S THE SCARY PART that turns all your scary markup into pretty web pages and structured data like lists of which links and templates are used.

Parser + Editor BFFs!

The most immediate reason is of course all this editing stuff we've been talking about. An editor can become much more powerful and flexible when it understands the structure of the document. Having a consistent way to build and represent that structure from the markup helps a lot!



Remember the Wikia RTE limitations? The new parser will ensure that even when we can't represent everything 100% in the HTML output, we *can* send a structure that the editor understands.

Open content is a neologism coined by David Wiley in 1998 [1] which draws an analogy between open source practices and the publishing of content online.[2] Open content describes thus any kind of creative work, or content, published under an open content license that explicitly allows copying and modifying of its information by anyone, not exclusively by a single organization, firm or individual.

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

Then, there's a Big-Picture reason. Wikipedia is an open-content project, with an explicit goal to create documents that can be redistributed and re-used. This is dependent on being able to use the data in compatible ways. MediaWiki itself is free software, but it's not suitable for all uses -- our data must be able to live on separately.

Known implementations

Name and link	Principal author(s)	Language	Input	Output
Wiky	Tanin Na Nakorn	Ruby	Markup	HTML
Wiky.js	Tanin Na Nakorn	Javascript	Markup	HTML
mw2html	Connelly Barnes	Python	Wiki url	HTML
mwlib	PediaPress.com	Python	Markup and other	parse tree, HTML, PDF, XML, OpenDocument

http://www.mediawiki.org/wiki/Alternative_parsers

There are dozens of alternate implementations of MediaWiki's syntax, but none of them behaves quite the same way MW does. Most will fail dramatically on complex articles and templates.

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From Wikipedia, the free encyclopedia

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Dawlat Isrā'īl

Flag | Emblem

Anthem:

Hatikvah (הַתִּקְוָה)

Capital (and largest city): Jerusalem[a] 31°47′N 35°13′E

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

Hidden behind even simple-looking text -- not to mention complex infoboxes -- can lie all sorts of templates, parser functions, and funky behavior.

Israel

State of Israel

מְדִינַת יִשְׂרָאֵל
Medīnat Yisrā'el
دَوْلَة إِسْرَائِيل
Dawlát Isrā'īl

Anthem:

Hatikvah (הַתִּקְוָה)

PDF export

mwlib, the parser used by our PediaPress-powered PDF & print on demand export system, handles most constructs fairly well, but may still have rendering issues.

Israel

{{{1}}}
{{PAGENAME}}Category:Wikipedia pages with incorrect protection templates

m² | {{formatnum:{{{area_km2|...}}}}} km^2]] (151st
)
{{formatnum:{{{area_sq_mi|...}}}}} sq mi

{{{1}}}

{{#ifexist:Template:ISO 3166 code {{{common_name|...}}} |...}}

[[File: Coat of arms of Israel.svg

|85px |alt=| Emblem
of Israel

]]

[[File: Flag of Israel.svg |125px|border|alt= A white flag with horizontal blue bands close to the top and bottom, and a blue star of David in the middle |Flag of Israel]]

{{#ifexist:Flag of {{{common_name|...}}} |...}}

{{#ifexist:{{{symbol_type_article|...}}} of {{{common_name|...}}} |...}}

Anthem: Hatikvah
The Hope

[[File: Location|Israel.svg

|250px |center |alt= Location of **Israel** (ceasefire lines as per 1949 Armistice Agreements. Excludes areas occupied since the 1967 Six Day

| Location of **Israel** (ceasefire lines as per 1949 Armistice Agreements. Excludes areas occupied since the 1967 Six Day War)

]]

Location of **Israel** (ceasefire lines as per 1949 Armistice Agreements. Excludes areas occupied since the 1967 Six Day War)

Official language(s) Hebrew, Arabic

http://sweble.org/crystalball/

Despite very good overall syntax coverage, the Sweble wikitext parser doesn't handle a lot of template and parser function constructs, and can simply break on them.

Why so hard?

Fragile

Bug 14562

```
UNIQ7cf5e30523cef35e-nowiki-00000000-QINU
```

```
<nowiki>foo</nowiki>
```

Bug 22555

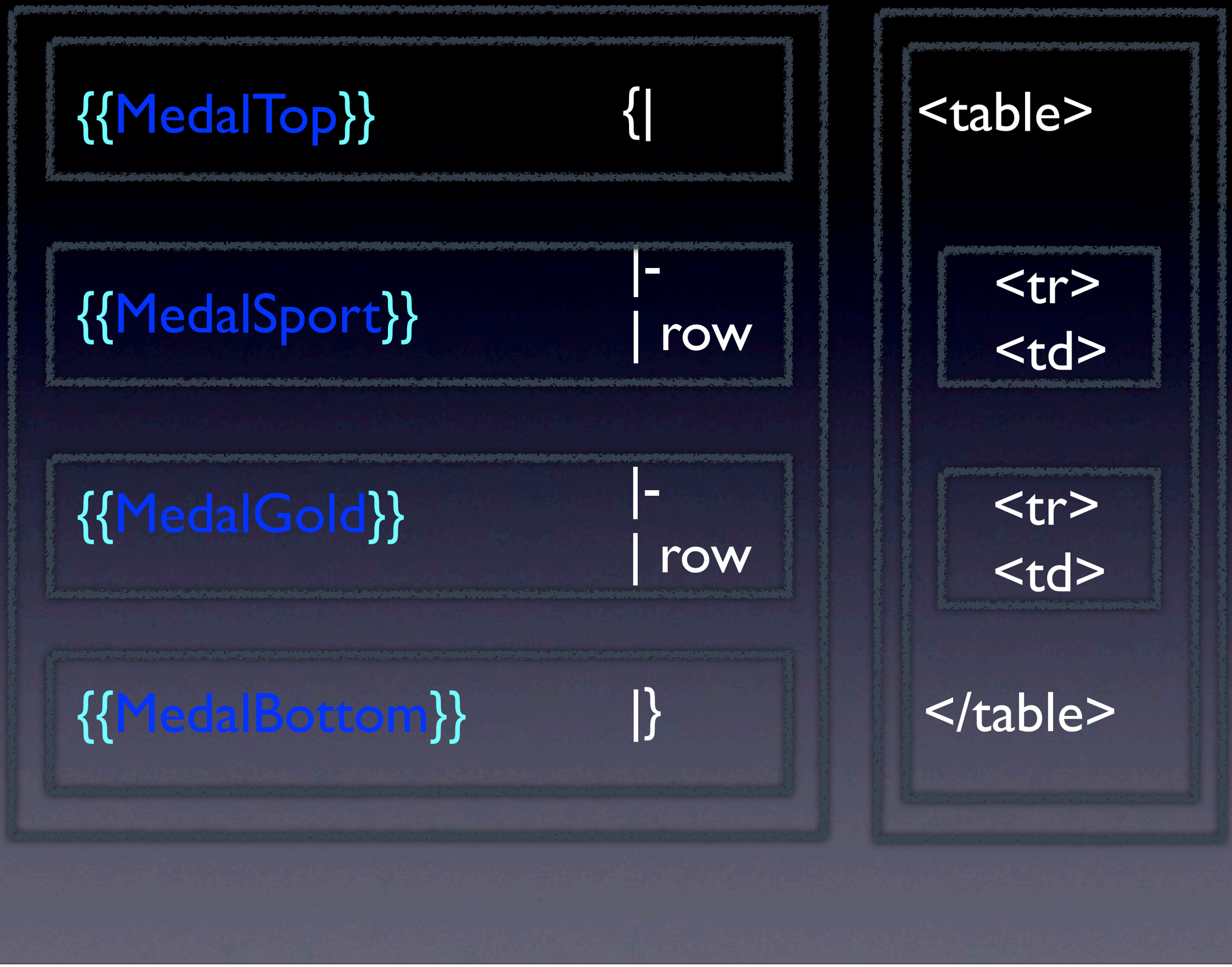
```
UNIQ7cf5e30523cef35e-nowiki-00000004-QIN{{{1}}}
```

The parser's main body consists of layer upon layer of fragile string processing, leading to strange bugs when different layers fail to respect each other properly. More structured processing should make this less error-prone.

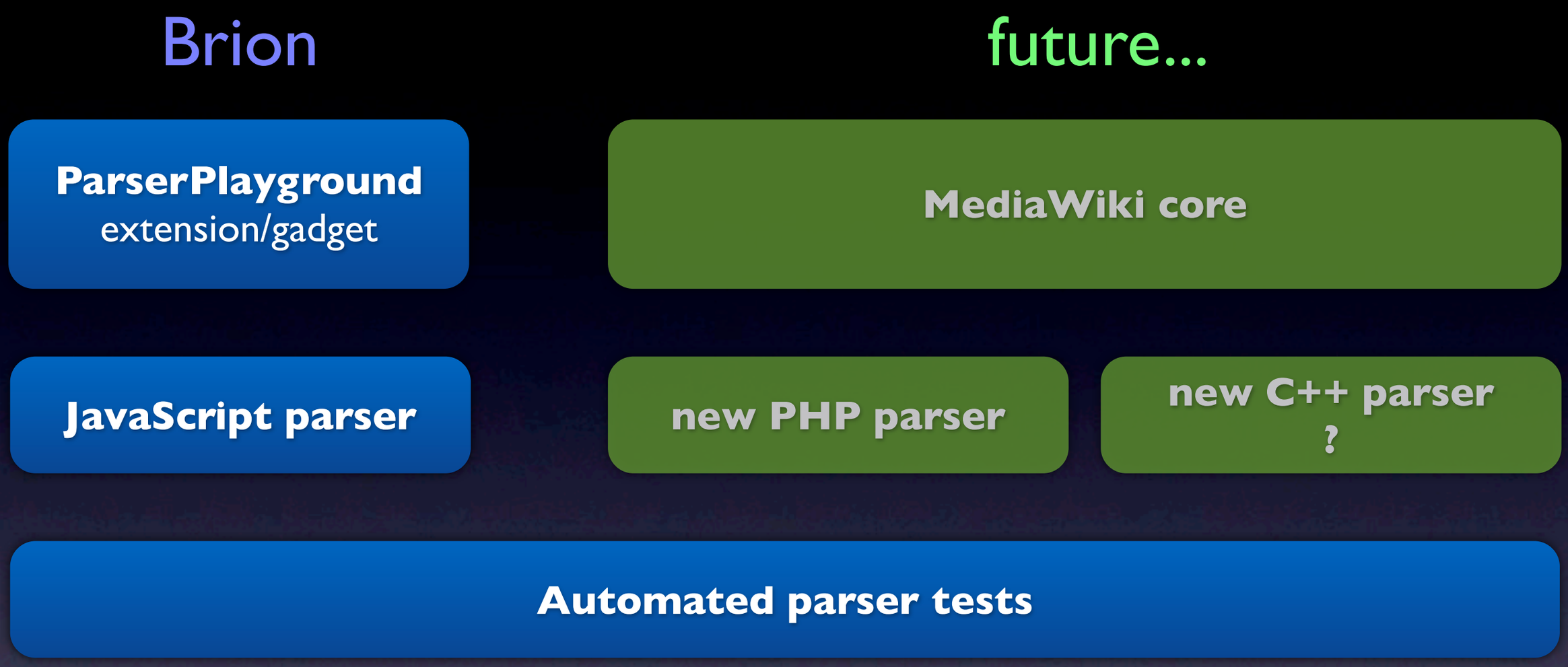
Tricky templates

```
{{MedalTop}}
{{MedalSport | Men's [[Alpine skiing at the Winter O
{{MedalGold | [[1976 Winter Olympics|1976 Innsbru
{{MedalBottom}}
```

Templates that separately open and close lists and tables are very frequently used, such as these sports medals templates on English-language Wikipedia.



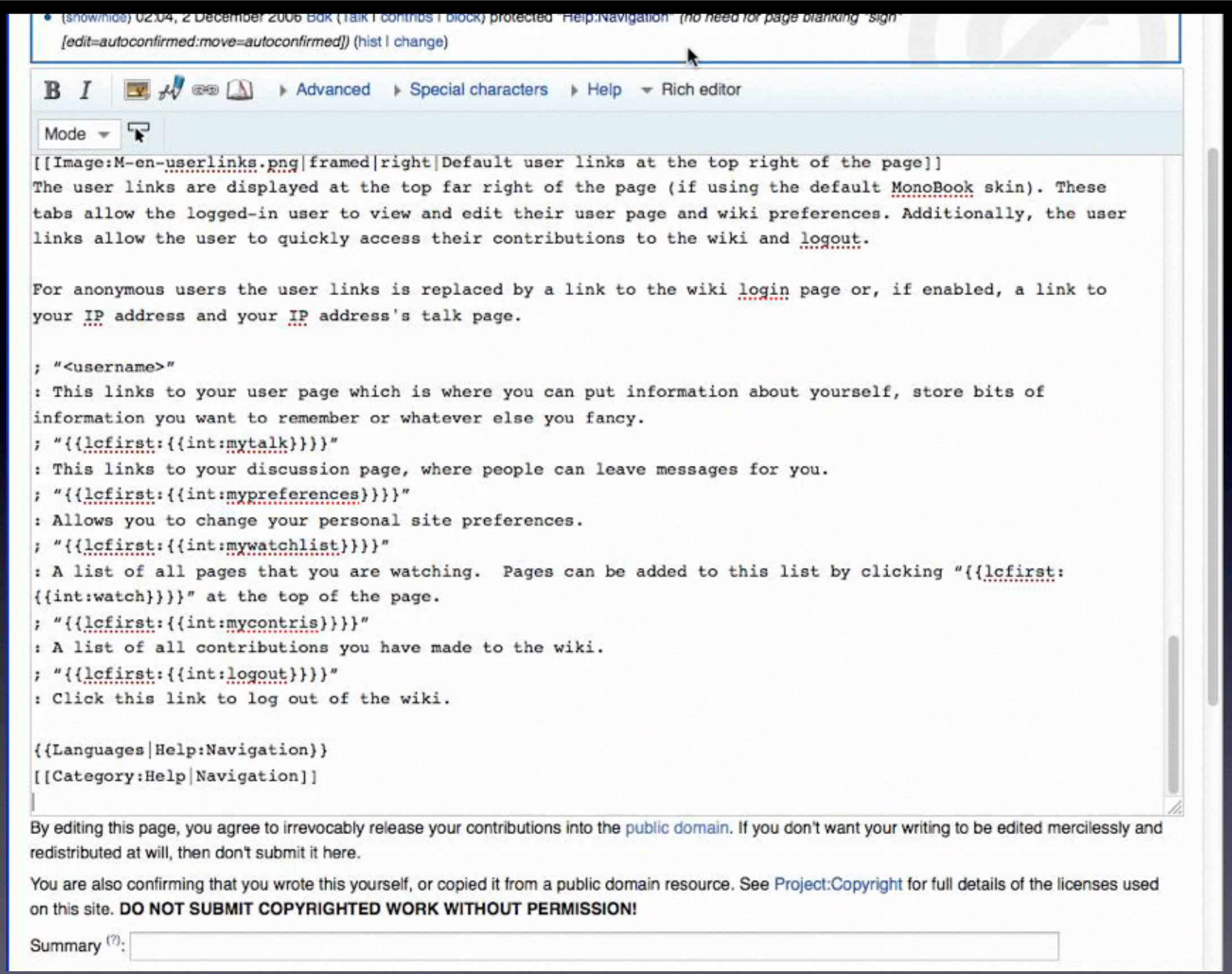
Here, each template expands into just a piece of the table. If we expand the templates in-place in a node tree, the table rows will be siblings or cousins of the table-open node, rather than its children. Because HTML tables require a hierarchical structure, we need to construct a separate wiki ‘DOM’ and reassemble some larger structures into a legit HTML output tree.



Visual Editor
& multi-user editing infrastructure prep

Trevor, Inez, Neil

I've started on a JavaScript-based parser implementation that can be used in a client-side Gadget for testing on existing wikis. Later on we'll build a PHP, and possibly an accelerated C ++ version to integrate into MediaWiki core; having two compatible implementations will also give us more confidence in the specification that we're creating. Trevor and Inez are working on the visual editor components, which will start to plug into the actual parser output soon. Neil's also putting together the infrastructure we'll need to do multi-user editing -- we've seen from Wikimedians' use of Etherpad how useful this is, and consider it a long-term requirement for a rich editor.



http://www.mediawiki.org/wiki/Extension:ParserPlayground

The ParserPlayground extension carries our in-progress parser layer, currently using a basic Parser Expression Grammar parser generator and an ad-hoc JSON-style intermediate format. This can also be imported as a gadget on live sites; as we continue integrating pieces, it'll be available for anyone to try out on real Wikipedia and Wikibooks, to test rendering and editing in a real environment.

Wikitext parser/Environment

Every wikitext parsing action takes place within an **environment**. Calling application must provide an environment object to the parser engine, which allows detecting what else is in the system, what extensions are available, the current time and user info, etc.

The ParserEnvironment defines most of the interface between the Parser system and the host application.

In the ParserPlayground extension this is implemented in the MWParserEnvironment JS class.

todo: define specific interfaces on the Environment object for the Parser object to use, in a reasonably abstract manner

```
/**
 * @return MWParserFunction
 */
getParserFunction: function( name ) {
        if (name in this.parserFunctions) {
                return new this.parserFunctions[name]( this );
        } else {
                return null;
        }
},
```

http://www.mediawiki.org/wiki/Wikitext_parser/Environment

To make it work as a gadget, the initial work on the new parser is being done in JavaScript which can be loaded in safely without changing the server configuration. This will also guarantee that once we finish the PHP code for core we'll have two provably compatible implementations of our specification. Creating a clear interface between the parser and its host application environment is an important part of this -- MediaWiki's parser has traditionally been hard to extract out to reuse even in other PHP-based software.

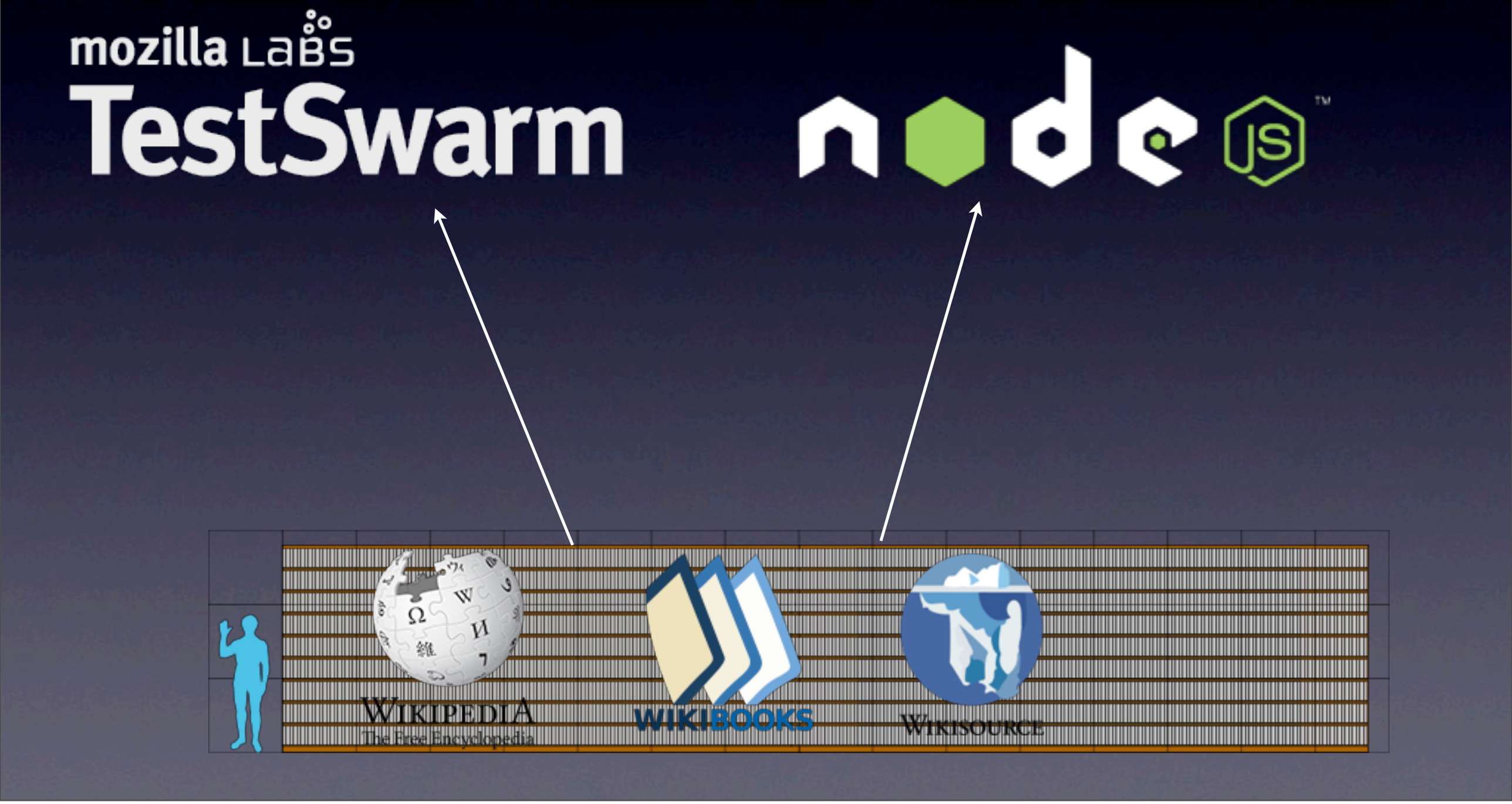
JavaScript testing

mozilla LABS
TestSwarm

```
Reading tests from "maintenance/parserTests.txt"...
Running test Blank input... PASSED
Running test Simple paragraph... PASSED
Running test Simple list... PASSED
Running test Italics and bold... PASSED
Running test <nowiki> unordered list... PASSED
Running test <nowiki> spacing... PASSED
Running test nowiki 3... PASSED
Running test Comment test 1... PASSED
Running test Comment test 2... PASSED
Running test Comment test 3... PASSED
Running test Comment test 4... PASSED
Running test Comment spacing... PASSED
Running test Comment whitespace... PASSED
```

Of course we're not just going to rely on humans for testing! The JavaScript parser implementation can be batch-tested in real browsers through the TestSwarm system, and in a (much faster!) command-line server environment using Node.js, a server-side environment built around Google's V8 engine.

JavaScript testing



I've started on a batch test system that runs over an entire Wikipedia data dump: our production sites can become a testing corpus to look out for regressions and help us determine when the new parser is "good enough" to cover all but the needed corner cases.

When??

http://commons.wikimedia.org/wiki/File:BahnhofsuhrZuerich_P1050253.jpg

So you're probably all asking yourselves, WHEN IS THIS COMING? When can I start helping out? We hope to have opt-in testing of a real, if basic editor by the end of the year, moving towards more public rollouts in mid-2012. Brave gadget testers should have some fun things to play with even earlier this year.

Where?

http://www.mediawiki.org/wiki/Future/Parser_plan

wikitext-l

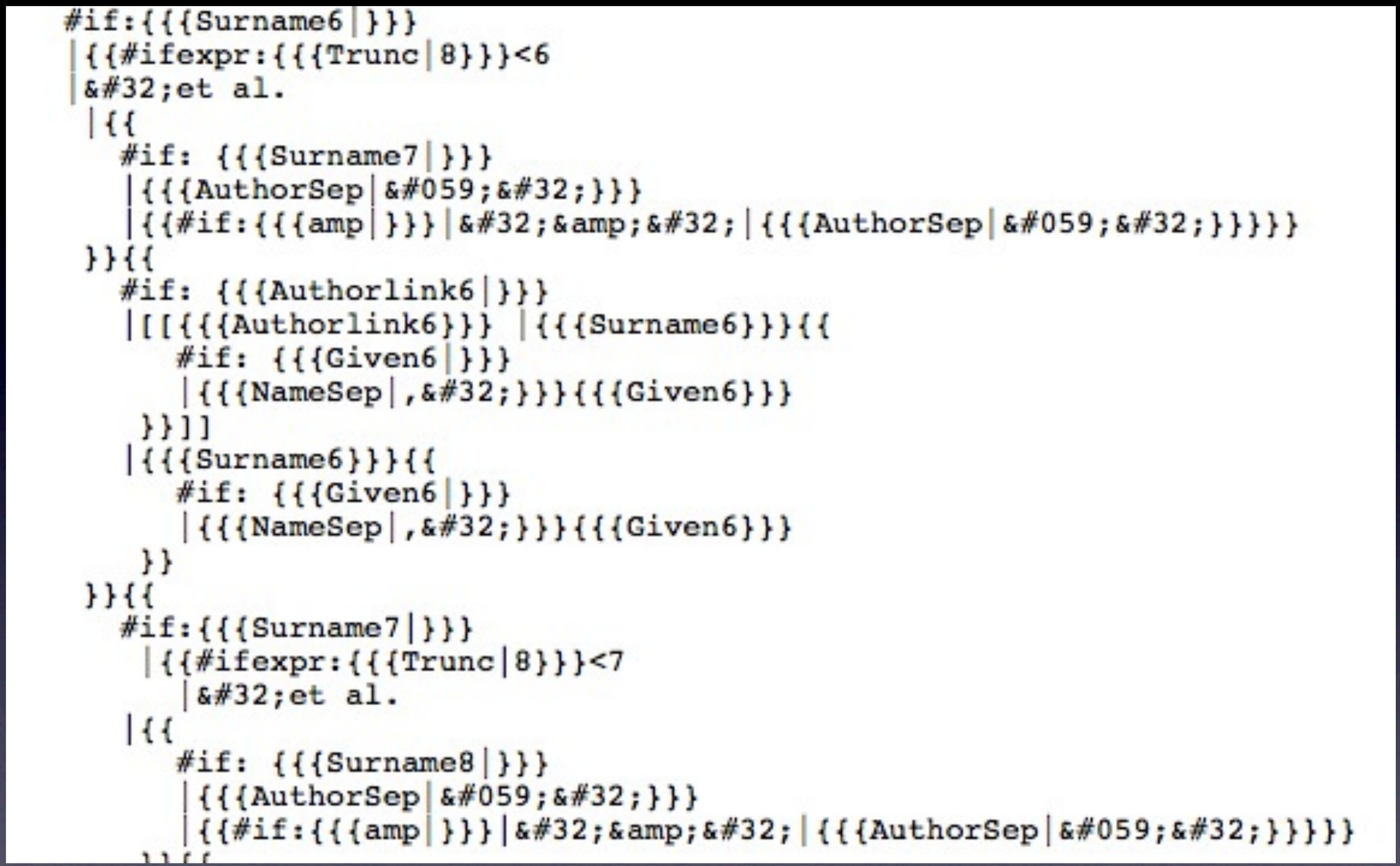
extensions/ParserPlayground

parsers/wikidom

If you're very brave though, you can hop into the earlier work we're doing now: defining the environment and interface for the parser, the intermediate data structures, and the creation of the basic editing widget.

What about templates?

So, what about templates? We already gave some examples of tricky constructs that the parser & editor will have to deal with -- the intention is to get a solidly defined implementation that's very nearly compatible with the previous parser so it can replace it for all our current data structures. So the good news is, you shouldn't have to change too many templates to make them work; we'll try our best to make the parser work with them.



But we know that these kinds of templates are just *really hard to read*, write, and maintain. So we're also keeping in mind new ways to create templates in the future.

```
#if:{{{Surname6|}}}
|{{#ifexpr:{{{Trunc|8}}}<6
|&#32;et al.
 |{{
   #if: {{{Surname7|}}}
    |{{{AuthorSep|&#059;&#32;}}}
    |{{#if:{{{amp|}}}|&#32;&amp;&#32;|{{{AuthorSep|&#059;&#32;}}}}}
 }}{{
   #if: {{{Authorlink6|}}}
   |[[{{{Authorlink6}}} |{{{Surname6}}}{{
      #if: {{{Given6|}}}
       |{{{NameSep|,&#32;}}}{{{Given6}}}
    }}]]
   |{{{Surname6}}}{{
      #if: {{{Given6|}}}
       |{{{NameSep|,&#32;}}}{{{Given6}}}
    }}
 }}{{
   #if:{{{Surname7|}}}
    |{{#ifexpr:{{{Trunc|8}}}<7
      |&#32;et al.
   |{{
      #if: {{{Surname8|}}}
       |{{{AuthorSep|&#059;&#32;}}}
       |{{#if:{{{amp|}}}|&#32;&amp;&#32;|{{{AuthorSep|&#059;&#32;}}}}}
```

```
{|
{{#script:
  foreach(params) {
     // add some table rows
  }
}}
|}
```

While this work should be largely independent of the editing work, having a clean document structure that we could pass into more programming-like templates could make some kinds of thinsg a LOT easier to maintain.. for instance anything that has to loop over multiple inputs.

???

It’s still up in the air exactly what we’ll end up with, but expect some experimentation with JavaScript and/or simple languages resembling a JavaScript subset. Cleaner interfaces, structured data, better caching, etc could end up allowing much more efficient template execution, including offloading slow processing to a dedicated script engine.

!!!!

Of course that leads on to other projects to help contributors create and share their own interactive code; making Gadgets and user scripts easier to create and safer to share by defining stable JavaScript interfaces. Hopefully I'll be able to do a talk on that at next year's Wikimania!

the

http://www.mediawiki.org/wiki/Future

is now!

end :D