

The Alipi authoring guidelines

Status of this Document

This document is a working draft that specifies guidelines for web authors, and requests discussion and suggestions for improvements.

Copyright Notice

This document is published under the Janastu notice and license, June 2011.

Abstract

For those familiar with accessibility issues pertaining to web page design, the W3C recommendations discuss accessibility issues and address them by providing accessible design solutions such as a text equivalent for images and other multimedia content to make it accessible for visually-impaired users; or a non-text equivalent for text targeting a deaf audience for instance.

However, the need of Alipi in addressing accessibility is different. Print-impaired users are people able to use their vision and their hearing capabilities, but have difficulties accessing written text. A non-disabled user navigates within the web page and understands its structure instantly by relying on image connotations or paragraph titles for example. It is however frustrating for a print-impaired user to use assistive technologies such as content readers in order to understand the page structure: using an auditory description is not adapted to his needs since he can see and would rather rely on his vision than his hearing. Another barrier is the language. In fact, if the spoken/written language is not familiar to the user, it would not help him understand what is going on. Thus, the idea of Alipi is to lay out a web page's content in a certain way that allows print-impaired users (or illiterate users as well) to understand its structure, and thereby, making it accessible.

Another accessibility aspect Alipi is discussing is localization. People from Karnataka in India, have only a few documents available in Kannada, their native language; and therefore, cannot access most web pages. The solution to this issue provided by Alipi is re-narration: a given document can be rendered to address a certain community either by translating the whole document in another language or by making its content more understandable (e.g explaining what a certain law is about), or simply by rendering some of its components (e.g providing an audio description for a text or adding a connotation to a video). Alipi provides a re-narration tool available on alipi.janastu.org/page/github. This document gives guidance on how to make a valid re-narration and explains how re-narrations would evolve within the Alipi community.

[Alipi](#) is therefore a Web accessibility project with a difference: it allows users to re-narrate the Web, explaining Web content in ways that are more relevant and accessible for print-impaired communities.

Table of contents

1. **Introduction**
2. **Associations**
 - 2.1 Purple numbers and Permalinks
 - 2.2 Resource Description Framework
 - 2.3 Topic Maps
 - 2.4 Microformats
 - 2.4.1 rel="tag"
 - 2.4.2 XFN: XHTML friends network
 - 2.5 Microdata
 - 2.6 Id-Class
 - 2.7 Comparison
3. **Re-narration**
4. **Filters**

1. Introduction

Lipi means alphabet, letter, writing or script in Sanskrit and in most Indian languages. “a” as a prefix is used as a negation in Indian languages. So “alipi” as a word means without-alphabet or text/print-impaired.

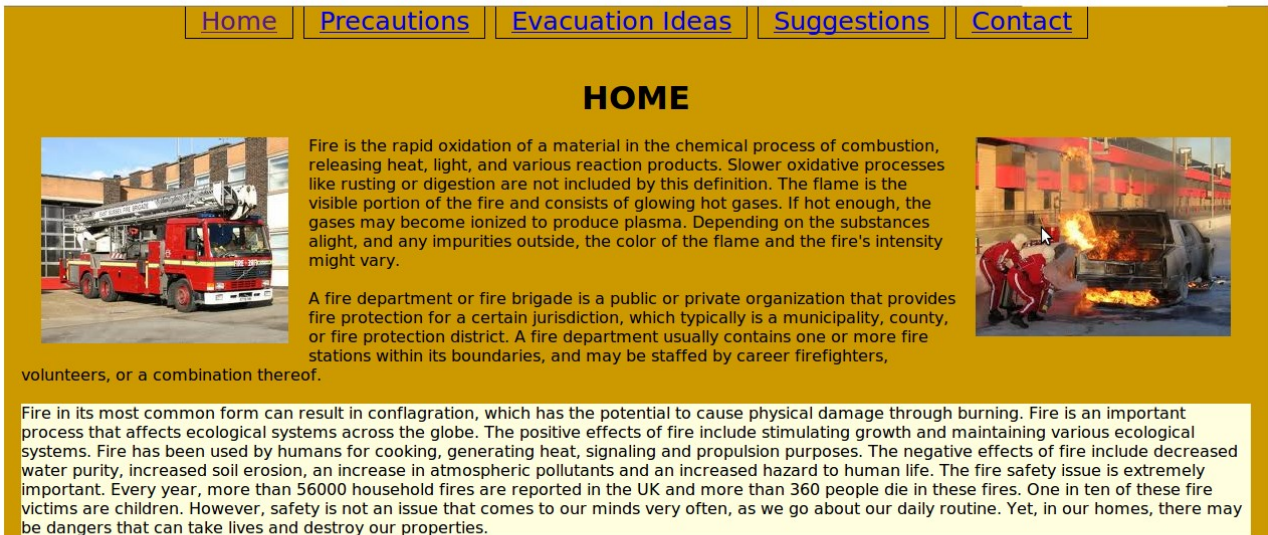
In developing countries like India, in addition to the visually handicapped there is another significant segment of the population, namely the insufficiently literate, who are also a large target community for provisioning screen reading of content. This segment would, however, benefit from a visually rich rendition of a web site while “reading out” the content. “Alipi - god’s own content” is an investigation into creating and managing locally relevant accessible content for communities.

Alipi specially addresses the needs of the print-impaired community by indicating structure in a web page and helping following it visually; which becomes the basis for Alipi relations. Moreover, it is a generic Web-framework for developing and rendering narratives that assist in accessing Web-content across cultural boundaries. It is therefore about Web-accessibility for digital Inclusion or e-inclusion. For more details, please visit the Alipi official web page: <http://alipi.janastu.org/>

This guide begins by providing several ways to establish associations between web elements and compares their use for Alipi. It then describes Alipi's re-narration feature and gives guidance on how to create a valid narration for a given document. Next, it explains how can a web page declare a certain person or community as a recommended re-narrator.


2. Associations

As mentioned above, Alipi indicates the structure of a web page and explicitly defines the relationship between its content elements. The screen-shot below, from the fire safety page (c.f. <http://a11y.in/a11ypi/idea/firesafety.html>), represents one example of how to make obvious these relationships:




Home Precautions Evacuation Ideas Suggestions Contact

HOME



Fire is the rapid oxidation of a material in the chemical process of combustion, releasing heat, light, and various reaction products. Slower oxidative processes like rusting or digestion are not included by this definition. The flame is the visible portion of the fire and consists of glowing hot gases. If hot enough, the gases may become ionized to produce plasma. Depending on the substances alight, and any impurities outside, the color of the flame and the fire's intensity might vary.

A fire department or fire brigade is a public or private organization that provides fire protection for a certain jurisdiction, which typically is a municipality, county, or fire protection district. A fire department usually contains one or more fire stations within its boundaries, and may be staffed by career firefighters, volunteers, or a combination thereof.



Fire in its most common form can result in conflagration, which has the potential to cause physical damage through burning. Fire is an important process that affects ecological systems across the globe. The positive effects of fire include stimulating growth and maintaining various ecological systems. Fire has been used by humans for cooking, generating heat, signaling and propulsion purposes. The negative effects of fire include decreased water purity, increased soil erosion, an increase in atmospheric pollutants and an increased hazard to human life. The fire safety issue is extremely important. Every year, more than 56000 household fires are reported in the UK and more than 360 people die in these fires. One in ten of these fire victims are children. However, safety is not an issue that comes to our minds very often, as we go about our daily routine. Yet, in our homes, there may be dangers that can take lives and destroy our properties.

Image 2.0: as the user points to the fire engine image, the text "associated" with the image is high-lighted.

Once the user hovers the mouse over an image, its related text is highlighted. This way, the user knows that these two elements are related without actually relying on the text meanings.

This relationship can be established using several HTML technologies; this section presents some of them and compares their use for Alipi.

2.1 Purple numbers and Permalinks

“Purple Numbers is a suite of tools that allows one to address paragraphs of HTML content. It was originally conceived by Douglas Engelbart for his creation of hypertext. The name comes from the faint, purple numbers at the end of each paragraph, which represent the link to that paragraph.” (as defined in Wikipedia.com: en.wikipedia.org/wiki/Purple_Numbers)

HTML allows you to link to parts of a document if the target is defined (using the <a > tag). It is possible to address parts of an HTML document by adding HTML anchors to each chunk of text with names corresponding to hierarchical addresses (ie purple numbers). The result is adequate and works on existing systems.

Nevertheless, purple numbers (or anchors) are not very helpful for dynamic documents, because as items get moved around, links to a hierarchical address will potentially point to the wrong item. To solve this problem, permalinks (or permanent links) are to be used. As they link to static pages, we are sure that the content they link to has not been altered.

Hence, combining permalinks to link to pages, with purple numbers to link to parts of a page leads to the appropriate result for Alipi.

See: http://blogs.oracle.com/coolstuff/entry/permalinks_purple_numbers_and_the

To illustrate this example, let us take the Alipi fire safety page (c.f <http://a11y.in/a11ypi/idea/firesafety.html>)

```
<div id="asso0" class="header">
<link href="#div1" >

</link>
</div>
<div id="div1" class="header">
A fire department or fire brigade is a public or private organization that provides fire protection
for a certain jurisdiction, which typically is a municipality, county, or fire protection district.
A fire department usually contains one or more fire stations within its boundaries, and may be
staffed by career firefighters, volunteers, or a combination thereof.
</div>
```

Example 2.1: Purple numbers used to indicate Alipi associations

Since the id attribute can be used as an anchor

(c.f <http://tantek.com/log/2002/11.html#L20021128t1352>), it is utilized in conjunction with the <link> tag to establish a relationship between the fire brigade image (as the link source) and the paragraph to which it is related (as the link target).

The <link> tag is used here instead of the <a > so that the relationship between the elements is invisible to the user.

2.2 Resource Description Framework

RDF is a standard model for data interchange on the Web. It extends the linking structure of the Web to use URIs to name the relationship between things as well as the two ends of the link (this is usually referred to as a triple). Using this simple model, it allows structured and semi-structured data to be mixed, exposed, and shared across different applications.

This linking structure forms a directed, labeled graph, where the edges represent the named link between two resources, represented by the graph nodes. This graph view is the easiest possible mental model for RDF and is often used in easy-to-understand visual explanations. (as defined in the w3 website: <http://www.w3.org/RDF/>)

The underlying structure of any expression in RDF is a collection of triples, each consisting of a subject, a predicate that denotes the relationship and an object.

To express RDF triples inside (X)HTML pages using span tags, RDFa which stands for RDF-in-attributes can be used.

An example is shown in Wikipedia.com: <http://en.wikipedia.org/wiki/RDFa>

Another way to express a semantic relationship between elements is the use of the WAI-ARIA role properties created for the accessibility's sake.

See WAI-ARIA RDF Roles Model: <http://www.w3.org/TR/2006/WD-aria-role-20060921/#roles>

Below is an example of how to create a relationship between elements using RDFa:

```
<html xmlns="http://www.w3.org/1999/xhtml"
  xmlns:dc="http://purl.org/dc/elements/1.1/">
<body>
<div id="asso0" class="header" about="#div1" property="dc:description" >

</div>

<div id="div1" class="header" >
A fire department...thereof.
</div>
</body>
```

Example 2.2.1: RDFa used to indicate Alipi associations within the same page

The essence of RDFa is to provide a set of attributes that can be used to carry meta-data in an XML language (hence the 'a' in RDFa). Some of these attributes are:

- about: a URI or CURIE specifying the resource the meta-data is about
- rel and rev: specifying a relationship or reverse-relationship with another resource
- property: specifying a property for the content of an element

This example uses the DC (A.K.A Dublin Core) vocabulary. It allows describing resources such as books, videos or images.

Specific vocabularies allow to describe some specific semantic relationships between the elements. The code above semantically tags the text and specifies the property of the content of the fire brigade image as a description.

The rel attribute could have been used instead of the attribute property in this case to establish a relationship between the image and the text for which the value would be a description.

N.B:

Another strength of RDFa, is that the “about” attribute allows introducing new properties about elements placed anywhere in the web using IRIs [1].

The fire brigade image on the fire safety page, for instance, can be about some text placed in another page.

```
<div id="asso0" class="header" about="some_url#id" property="dc:description" >

```

Example 2.2.2: Rdfa used to indicate Alipi associations with an external element

[1]: For those not familiar with the term IRI, it means “Internationalized Resource Identifier” which is basically a fancy way of saying “a URL that allows western language characters as well as characters from any language in the world, such as Arabic, Japanese Katakana, Chinese ideograms...etc”.

2.3 Topic Maps

Topic Maps is a standard for the representation and interchange of knowledge using:

- * topics: representing any concept, from people, countries, and organizations to software modules, individual files, and events.
- * associations: representing hyper-graph relationships between topics.
- * occurrences: representing information resources relevant to a particular topic.

The topic map takes the key concepts described in the databases and documents and relates them together independently of what is said about them in the information being indexed. This means taking a step back from the details and focusing on the forest rather than the trees. Or, to put it another way, it means managing the meaning of the information, rather than just the information.

See: <http://www.xml.com/pub/a/2002/09/11/topicmaps.html>

The image below describes a relationship using Topic Maps:



Image 2.3: a “Description” relationship between an image and a text

In this example, the topics are the paragraph and the image, the relationship between them is a description and the occurrence is one.

“The semantic expressiveness of Topic Maps is, in many ways, equivalent to that of RDF, but the major differences are that Topic Maps provide a higher level of semantic abstraction (providing a template of topics, associations and occurrences, while RDF only provides a template of two arguments linked by one relationship) and (hence) allow n-ary relationships (hyper-graphs) between any number of nodes, while RDF is limited to triplets”.

See: http://en.wikipedia.org/wiki/Topic_Maps/

2.4 Microformats

Microformats are a way of adding simple markup to human-readable data items such as events, contact details or locations, on web pages, so that the information in them can be extracted by software and indexed, searched for, saved, cross-referenced or combined.

More technically, they are items of semantic markup, using just standard old semantic (X)HTML with a set of common class-names and "rel" values. They are open and available, freely, for anyone to use. They rely on uses existing technology and can be hand crafted i.e. disintermediates the

expert. They are meant to be designed by less skilled community. (Almost by definition this community is larger than the community of experts.)

If we consider Microformats, we see that they are not technically as good as Web Services and RDF (c.f Web Services and the Innovators Dilemma:

<http://www.justinleavesley.com/journal/2005/7/28/web-services-and-the-innovators-dilemma.html>), but their audience is much more important than the latter.

In this document, only two Microformat elements are treated. For information about the other elements, see the Microformats wiki page: http://microformats.org/wiki/Main_Page

2.4.1 rel="tag"

Rel-Tag is one of several Microformats. By adding rel="tag" to a hyperlink, a page indicates that the destination of that hyper-link is an author-designated "tag" (or keyword/subject) for the current page.

The linked page should exist, and it is the linked page, rather than the link text, that defines the tag. The last path component of the URL is the text of the tag, so

```
<a href="http://technorati.com/tag/tech" rel="tag">fish</a>
```

would indicate the tag "tech" rather than "fish".

Tag Spaces:

The destination of a rel="tag" hyper-link is required to be a tag space (a place that collates or defines tags), In other words, using rel-tag to refer to the pages:

<http://www.technorati.com/tag/xyz>,

<http://del.icio.us/tag/xyz>,

<http://www.flickr.com/photos/tags/xyz/>

(and so forth) is asserting "this page is tagged «xyz»".

N.B: Tags Are Visible Meta-data:

rel="tag" hyper-links are intended to be visible links on pages and posts. As a result the invisible tag link syntax variant: `<link rel="tag" href="..." />` should not be supported by implementations.

On this URL: <http://www.delicious.com/popular/technology>, sites that are tagged under "technology".

More info in: <http://microformats.org/wiki/rel-tag>

2.4.2 XFN: XHTML friends network

What is XFN?

XFN is a simple way to represent human relationships using hyper-links.

Example: `...`

The reasons behind XFN?

XFN values describe the nature of a link between two people, rather than the people themselves.

"rel" XHTML attribute that already existed and which was defined to describe relationships is utilized. It has simply been extended to describe human relationships, as opposed to document relationships. Thanks to its being based on XHTML, XFN is easy to hand-author, and is both machine- and human- readable. By building on XHTML, there is no need to create a whole new language just to enrich the links that already exist.

Avoiding personal attributes:

“When you annotate a hyper-link to someone with rel="friend" for example, you are saying that you are a friend with that person. Whether or not you consider yourself to be a friend of someone else is something under your control, something which yourself are the authority over, and thus it makes sense that you be able to specify it. In addition, you are describing precisely the relationship between you, to from your perspective, and nothing more. You are not describing anything about the other person, such as their race, age, preferences, or gender for that matter. While some or most of these attributes may be persistent, and thus you may be able to confidently say what they are, the problem with saying so is that you are not the authority over another person’s attributes. Only the person themselves can authoritatively describe such attributes about themselves. And certainly it does not make any sense to mix such attributes with your description of your relationship with them.”

Positive or neutral relationships only:

Negative relationship terms have been omitted from XFN by design. The authors think that such values would not serve a positive end and thus made the deliberate decision to leave them out.

N.B:

Values are by implication present tense (e.g there is no way to say that i used to be friends with John.D).

For more info see : <http://gmpg.org/xfn/>

Below is an application of Microformats to an element of the Alipi fire safety page.

```
<body>
<div id="asso0" class="header">
<link href="#div1" rel="alternative">

</link>
</div>
<div id="div1" class="header">
A fire department...thereof.
</div>
</body>
```

Example 2.4: Microformats used to indicate Alipi associations

The Microformats are used in this example simply by adding the rel attribute. The value alternative indicates that the destination of that hyper-link (i.e the text) contains alternative information for the image. Other values were possible in this case. See the rel Microformats wiki page: <http://microformats.org/wiki/rel>

2.5 Microdata

Microdata is a WHATWG HTML5 specification used to nest semantics within existing content on web pages. Search engines, web crawlers, and browsers can extract and process Microdata from a web page and use it to provide a richer browsing experience for users. Microdata uses a supporting vocabulary to describe an item and name-value pairs to assign values to its properties. (as defined in Wikipedia.com: [http://en.wikipedia.org/wiki/Microdata_\(HTML5\)](http://en.wikipedia.org/wiki/Microdata_(HTML5))) .

```
<div id="asso0" class="header" itemscope itemType = "http://some address/type" >  
<link href="#div1" itemprop="description">  
  
</link>  
</div>  
<div id="div1" class="header">  
A fire department...thereof.  
</div>
```

Example 2.5.1: Microdata used to indicate Alipi associations

The item that semantics are about is defined by adding the itemscope element to the HTML tag that encloses information about the item. The itemType value specifies the type of this item. Item types are provided as URLs, in this case http://some address/type. To label properties of an item, the itemprop attribute is used. This example says that the image is the described item. The target link is specified as a description for the item.

The description type used in the example above is one of the item types provided on schema.org: <http://schema.org/Movie>

N.B:

Microdata as well as RDFa, permits identifying elements placed in external pages using IRIs.

```
<div itemscope itemType="http://example.com/types/Animal"  
  itemid="http://example.com/animal#frog">...
```

Example 2.5.2: Microdata used to indicate Alipi associations with an external element

2.6 Id-Class

The Id-Class (or HTML tagging) method consists of using simple HTML attributes to add some sort of meta-information to the content of a web page. It is a simple solution to relate objects in a page inspired from the CSS classes. A same style can be applied to various elements, possibly completely unrelated, by adding the same class attribute to these elements. And this is very similar to the project's goal.

The only idea missing is to relate some elements to another element like an image or a title. To this end, the id attribute also natively present in HTML can be used. Following this method, a group of elements with the same class name can be related in a semantic way to a unique element in the page.

See Johanna Royer's report on HTML tagging on <http://alipi.janastu.org/>

```
<body> <div id="asso0" class="header">

</div>
<div id="div1" class="header asso0">
A fire department...thereof.
</div>
</body>
```

Example 2.6.1: Id-Class used to indicate Alipi associations

Thus, using the Id-Class, several items can relate to one object by sharing its Id. Withing the same page, this relationship is straightforward. To link resources on different pages, namespaces are to be utilized.

In other words:

```
<div xmlns:ex="http://www.example.com/index.html" >
  <img class="ex:id_value">
</div>
```

Example 2.6.2: Id-Class used to indicate Alipi associations with an external element

where "id_value" is the id of an element placed on the page referred to by the namespace. Again, the external link should be available and not altered.

This method only says is that elements are related. It does not give any information about how the elements should be rendered in the browser. Thus, it is not likely to generate a CSS conflict. A scenario of conflict might be if conflicting CSS are given to two classes that are used on the same element (which is not Alipi specific but concerns HTML in general). However, to avoid some of these scenarios, it is considered that "relationship classes" should only have CSS on some events (e.g hover a picture, click on a title, etc.) and no "regular" CSS.

2.7 Comparison

In order to provide semantic relationships between elements in HTML pages, we need to be able to select/link these elements; then add the meta data (or the relationship) to them.

The first step of this process can be achieved by adding anchors to these elements. Then they can be linked using the HTML <a> tag. However, some problems are likely to arise due to dynamical contents (c.f section: Purple numbers and Permalinks).

Then, to add metadata or topics to granular chunks of HTML documents, the purple numbers (or anchors) can also be used in conjunction with RDF, Microdata or Topic Maps. They allow you to define relationships between data specified by URIs. With purple numbers, you can insert the URL of a paragraph into the appropriate RDF or Topic Map attribute.

The main advantage of the latter technologies resides in the standardization of the vocabularies. It allows a computer program, and possibly directly the browser, to understand the kind of relationships the elements have between them.

A simpler way to add metadata would be using Microformats.

Indeed, they rely on HTML old semantic tags, and only define new ways of utilizing them. They also provide some new accessibility features such as the style="speak-numeral:digits", so that telephone numbers are read by aural browsers as, for example, "five-five-five one-two-three-four" and not "five-hundred and fifty-five, one-thousand, two-hundred and thirty-two".

See: <http://microformats.org/wiki/hcard>

Moreover, the HTML "longdesc" attribute, can be used to provide longer descriptions using a URL reference when the "alt" attribute is not sufficient to describe the nature of the image. However, this attribute is not yet supported by the major browsers, and cannot be exploited for now.

The "profile" HTML attribute of the '<head>' tag, is utilized to specify the URI to a file or a white space separated list of URIs of meta data (i.e. Information about the webpage).

See: <http://www.w3resource.com/html/attributes/html-profile-attribute.php/>. The linked file contains definitions of the meta-data (a dictionary) used within the original document. The next link is an example of the "rel=tag" profile: <http://microformats.org/wiki/rel-tag-profile/>.

The "profile" attribute is in contrast to "longdesc" supported by the major web browsers. However, the W3C recommendations specify the proper way to dispose the information on the linked file, so that the browsers would be able to retrieve the related informations.

Perhaps this feature can be exploited to define new relationships in the profile related file and use them withing the HTML page as meta-data.

If we focus on simplicity, the "Id-Class" or "HTML tagging" method has the clear advantage. First of all, it does not require any new knowledge, any web designer is capable of adding class and id attributes to a web document.

The implementation of the RDF or the Microformats solutions for instance is not much harder, but the developer must find the appropriate vocabularies to describe all the relationships. And if none matches what he needs, then he will have to create a new vocabulary, if not several. It also allows for more flexibility. Indeed, with the "HTML tagging", elements can also be placed anywhere in the web. More importantly, they do not need to be related in the DOM structure to be related to each

others. Whereas with the other solutions, they need to be grouped in some way so that a parser can understand the relationship.

In addition, Alipi does not really need this feature in order to improve accessibility for print-impaired. Given that the text will be eventually spoken by a program, people who can see will have the same information as literate users. They do not need more details about the semantic relationships between elements. However, this would be interesting for non-sighted users. A screen-reader could analyze the RDFa annotations of a web page for instance and really improve its readability for blind users. This is not the purpose of Alipi, so we choose to use the HTML tagging method. Besides, it is possible to use several methods at the same time. If one chooses to use the Id-Class method, he can later add extra semantic information using the technologies stated above (or any other available ones) to ensure that data is discoverable by other external resources such search engines, crawlers, etc.

3. Re-narration

The semantic association discussed above provides indeed an overall understanding of a web page's structure. However, its expressiveness does not allow a clear explanation nor an accurate interpretation/translation of what the page is about.

Another accessibility issue might reside within the page's content itself. For instance, let's consider the “Ayodhya Verdict”, which is an 8132 page work only available in English. This work is inaccessible because it is:

- a technical document
- very lengthy
- hard to understand

An effective solution to this accessibility deficiency would be a derivative to this document, created by a competent community in a way that it is understandable by a less skilled audience. As an example, one possible re-narration of the “Ayodhya Verdict” would be a short summary of the verdict in a regional language made by a lawyer. This latter document would be more accessible because:

- it is less technical
- it has a shorter length
- it is easier to understand

This is the basis of Alipi's Re-narration.

More generally, let G be a directed graph where the nodes are documents that exist on the web. There is an edge from d_1 to d_2 with a label L , if d_2 is related to d_1 in the sense described by label L . Strictly speaking, d_2 and d_1 could reference the same URI-accessible document, but d_2 could be a transformation of d_1 . For example, d_2 could be a re-rendering of d_1 where d_2 is WAI-accessible to someone with color-blindness, or d_2 could be accessible to vision-impaired people.

WAI concerns itself with generating relatedness, not with identifying relatedness, i.e. the standard effectively makes it possible to generate d2 given d1. This kind of relatedness is primarily presentational (and thus, implicitly semantically related in a somewhat obvious way).

Alipi concerns itself with more generic semantic relatedness of documents, and also concerns itself with identifying relatedness as well as generating relatedness. i.e. given a document d1, it is interested in finding (either by identifying an existing one, or by generating one) a d2 that is related to d1 in the sense of L.

This is a really hard problem to solve efficiently for different notions of L-relatedness. Given a document d1, how will the set of L-related documents be discovered? Will they be generated (ex: machine translation across languages)? Or will they be fetched based on existing semantic markup on d1? Or, will they be fetched based on existing semantic markup on d2's? Or, will a document repository (ex: the web) be crawled to identify the set of L-related documents? If so, given a candidate document d2, what metrics will be used to determine if d1 and d2 are sufficiently closely L-related? Clearly, different domains and applications will require different standards of L-relationship between d1 and d2.

In light of the previous discussion, to avoid getting lost in an overgeneralized problem, Alipi focuses on a set of different projects in specific sub-domains where L is well-defined, and specifies a set of attributes which enable either the identification or generation of L-related documents.

These attributes are:

Attribute		Description
target	required	indicates properties about the audience the re-narration document is targeting. The target attribute is either a single or several white space separated “property:value” couples . Valid properties are: <ul style="list-style-type: none"> • lang: indicates the language of the targeted community. • geoloc: indicates its location. • occupation: indicates the profession occupied by the community.
foruri	required	Indicates the link to the re-narrated element.
ren-type	optional	Indicates the type of the re-narration. It represents the L-relatedness between the original document and its re-narration. Its default value is “re-narration”, which can be overridden to be more specific. Some possible values are: annotation, summary, abstract...etc.

version	required	Indicates the version of the re-narration. Please note that the actual version of the document is obtained by combining the foruri attribute with the version attribute. Indeed, two documents can carry the same version when they are in fact re-narrations for different elements.
ren-date	optional	Indicates the date of the re-narration.
ren-author	optional	Specifies the author of the re-narration.

Example

The following example is a re-narration of an image designated by **foruri**, targeting the community living in India and speaking Kannada.

```

```

Example 3.0: attributes of a re-narration

Below is an example of re-narration of a paragraph of the fire safety page (c.f <http://a11y.in/a11ypi/idea/firesafety.html>) in the Kannada language.

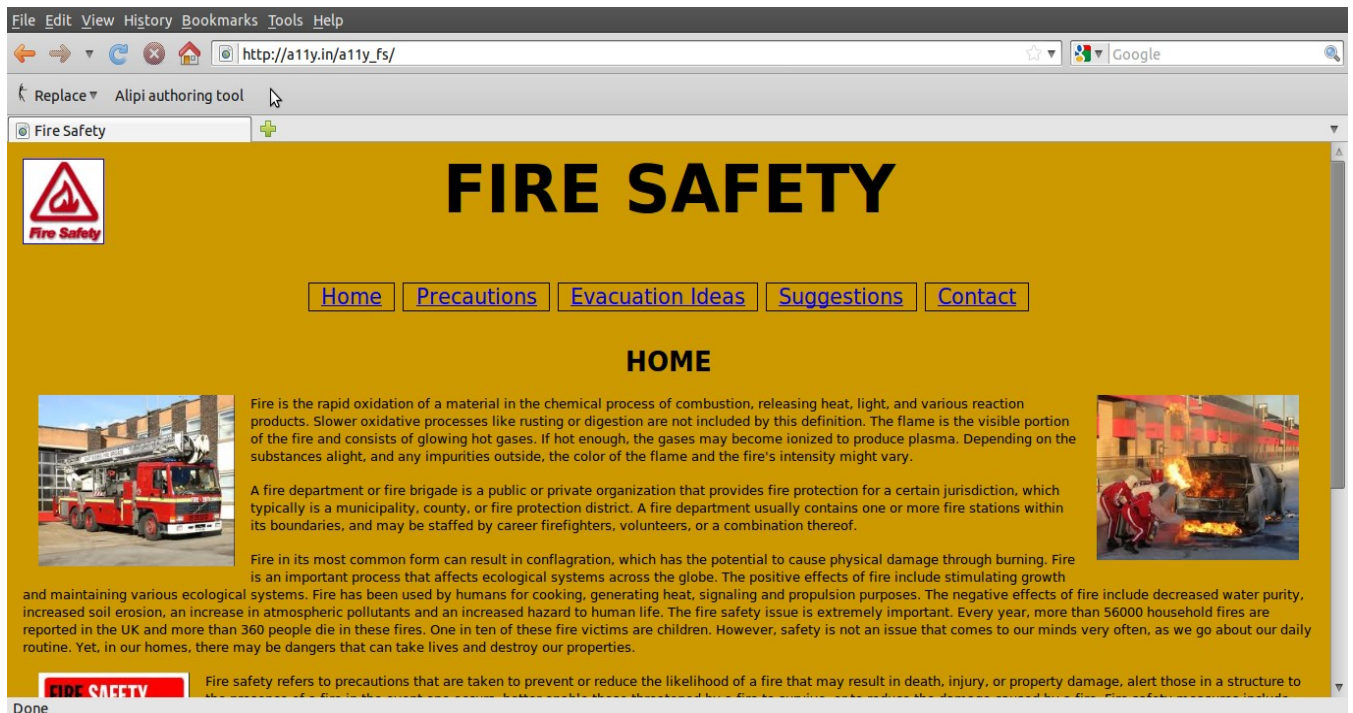


Image 3.1: the original safety page in English

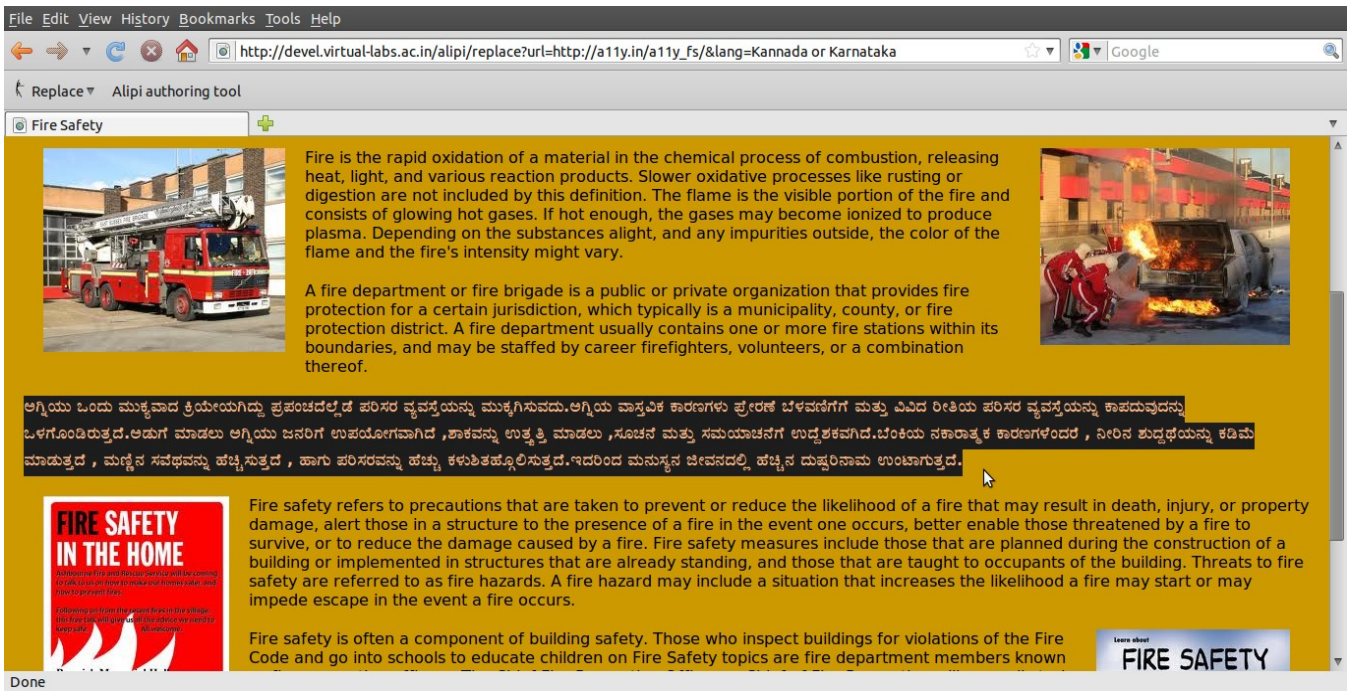


Image 3.2: a re-narration in Kannada

N.B:

Alipi processes re-narrations by picking up elements via their Ids and re-narrating them. However, some pages are not “well” authored. A possible example would be an article carrying a single Id element, and therefore, selecting a particular paragraph to re-narrate means picking up the whole article. To address this deficiency, Alipi uses XPATH queries when there is no straightforward way to select a single element.

4. Filters

Filters are a way for a web page to declare certain communities as recommended re-narrators. A filter is an XML file that lists URLs for re-narrators along with meta-data about each URL (the re-narrator's name, what is his rank among other authors, what is his occupation..etc) so that each page would have its “favorite” re-narrators.

The Alipi's Filter consists of XML tags. All URLs must follow the [RFC-3986](#) standard for URIs, the [RFC-3987](#) standard for IRIs, and the [XML standard](#).

The Filter must:

- Begin with an opening <urlset> tag and end with a closing </urlset> tag.
- Specify the namespace (protocol standard) within the <urlset> tag.
- Include an <author> entry for each URL, as a parent XML tag.
- Include a <url> child entry for each <author> parent tag.

All other tags are optional.

Attribute		Description
<urlset>	required	Encapsulates the file and references the current protocol standard.
<author>	required	Parent tag for each URL entry. The remaining tags are children of this tag.
<url>	required	URL of the page.
<name>	optional	The name of the author or the community of re-narrators
<priority>	optional	The priority of this re-narrator relative to other re-narrators. Valid values range from 0.0 to 1.0. The default priority of an author is 0.5.
<profession>	<optional>	Indicates the profession of the author (e.g sociologist, lawyer...etc)

Example

The following example shows a Filter in XML format.

```
<?xml version="1.0" encoding="UTF-8"?>
<urlset xmlns="http://www.alipi.janastu.com/Filters">
  <author>
    <url>http://www.example.com/</url>
    <name>Alipi</name>
    <profession>Engineer</profession>
    <priority>0.8</priority>
  </author>
  <author>
    <url>http://www.another\_example.com/</url>
    <name>Janastu</name>
    <profession>Teacher</profession>
  </author>
</urlset>
```

Example 4.1: an Alipi Filter

Using Filters

A page can provide multiple Filters. In order to do so, the **ren-filter** attribute embedded in the <header> tag is to be used. It specifies one or white space separated several filters for the page. The order (from left to right) in which filters are provided indicates their rank. If no **ren-filter** value is provided, the Alipi's default filter is used.

Example

```
<header ren-filter= "http://example.com/community1.xml  
http://another\_example.com/community2.xml" >...</header>
```

Example 4.2: a ren-filter attribute specifying recommended re-narrators

On the example above, it is indicated that the authors belonging to community1 and community2 are recommended. However, community1 is rather to be solicited than community2.