


## Practical & Cultural Issues in Designing International Web Sites

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Online version available from  
<http://www.w3.org/2006/Talks/fundamentos-web-ri/>



## Terminology

### Localization

The **adaptation** of a product, application or document content to meet the language, cultural and other requirements of a specific target market.

### Internationalization

The **design and development** of a product, application or document content that **enables** easy localization for target audiences that vary in culture, region, or language.

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slide 2



# Linguistic issues

Linguistic issues

- Separating content & presentation
- Cultural issues
- What this means to me

Linguistic differences

- Composite messages
- Managing text expansion

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slide 3



Linguistic issues

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# Linguistic differences

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This slide is part of a presentation. It features a blue header bar with the text 'Linguistic issues' and the W3C logo. The main content area is white with the title 'Linguistic differences' in blue. The footer is a light gray bar containing copyright information and the slide number '4'.

In this first section we will look at a few ways in which languages differ, and then see those differences causing practical issues for localization where the developer/designer has not thought about internationalization.

Linguistic issues  
Syntax differences

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You are speaking to her from my new house.


Estáis hablándole desde mi casa nueva.


私の新しい家から彼女と話しています。


تكلّمونها من بيتي الجديد

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This shows four different ways of writing one idea. In each case the order of 'words' and the number of 'words' is different.

Linguistic issues

Agreement & Concept mappings



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slide 6

This slide shows how the English word 'On' can map to three different words in Spanish. And then there are the masculine, feminine and plural forms of agreement that change the shape of the word according to its context.

Linguistic issues  
Agreement


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Number of pages	Russian word for 'page'
1	страница
2-4	страницы
5-10	страниц
11-20 (irregular)	страниц
21	страница
22-24	страницы
25-30	страниц
> 30	Repeat pattern of endings for 1 to 10.


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slide 7

In Russian there is a complex plural system. Apart from the irregular teens, the word endings are applied in a rotating way.



Linguistic issues  
Text expansion



Trim

Kantbeskæring

Effacement de bords


Eliminación de bordes

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slide 8

This slide introduces the idea that terms or labels can be of widely differing lengths in different languages.





Linguistic issues  
Text expansion



Input processing  
features

Eingabeverarbeitungsfunktionen

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slide 9

In languages such as German, Dutch or Swedish it is common to find English 'compound nouns' expressed as a single, long word.



This slide features a blue header bar at the top. On the left side of the header, there are three small squares of increasing size, followed by the text "Linguistic issues". On the right side of the header is the W3C logo. The main body of the slide is white and contains the title "Composite messages" in a large, blue, sans-serif font. At the bottom of the slide, there is a thin grey bar containing copyright information on the left and the slide number "10" on the right.

Linguistic issues

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# Composite messages

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Linguistic issues

Handling variables

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QUALITY Assurance

Markup Validation Service v0.7.2

[Home](#)
[About...](#)
[News](#)
[Docs](#)
[Help & FAQ](#)
[Feedback](#)

Result: Failed validation

There were 268 validation errors in the file myFirst.html

File: webdeveloper\_localhost\_1159293639132.html

Modified: (undefined)

Server: Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.8.0.7) Gecko/20060909 Firefox/1.5.0.7

Size: (undefined)

Content-Type: text/html

Encoding: utf-8

Doctype: XHTML 1.0 Transitional

Root Namespace: http://www.w3.org/1999/xhtml

Note: The Validator XML support has some limitations.

Jump To:

Results

This page is **not** Valid XHTML 1.0 Transitional!

Below are the results of checking this document for XML well formedness and validity.

1. Error Line 14 column 103: end tag for "br" omitted, but OMITTAG NO was specified.

... 16:16:10 rishida Exp \$</p><br></body>

You may have neglected to close an element, or perhaps you meant to "self-close" an element, that is, ending it with ">" instead of ">".

2. Info Line 14 column 93: start tag was here.


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slide 11

For this slide we imagine that the W3C Validator is altered slightly so that it tells you how many validation errors are in your file. It will do this using a 'composite message' whose parts are assembled using PHP code as the page is served.

Linguistic issues  
Handling variables

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There were 268 validation errors in the file myFirst.html.

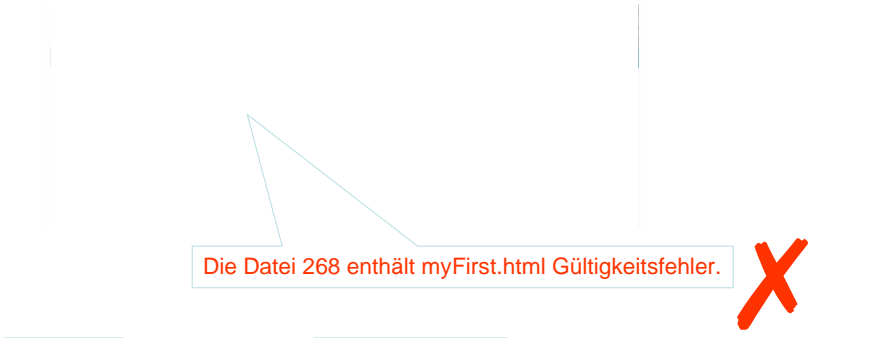
Die Datei myFirst.html enthält 268 Gültigkeitsfehler.

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In the German translation, the order of the two variables may need to be changed.

Linguistic issues  
Handling variables

W3C



Die Datei 268 enthält myFirst.html Gültigkeitsfehler. **X**

```
echo "There were ".$errors." validation errors in  
the file ".$filename."";
```

```
echo "Die Datei ".$errors." enthält ".$filename."  
" Gültigkeitsfehler.";
```

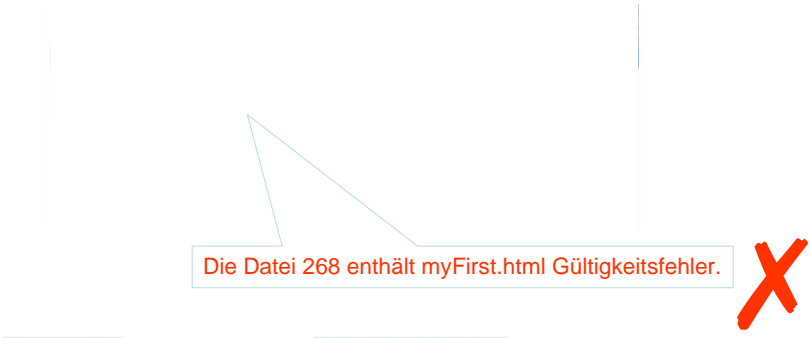
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Typically translators have no access to the actual code, to avoid them introducing bugs into the page. Either the text is extracted or a translation tool masks the code.

Although we are fortunate that we were able to add words after the second variable, due to the English string containing a period, this still didn't produce the right result. The German reads "File 268 contains myFirst.html validation errors."

Linguistic issues  
Handling variables

W3C



Die Datei 268 enthält myFirst.html Gültigkeitsfehler. X

```
echo "There were ".$errors." validation errors in  
the file ".$filename."";
```


```
echo "Die Datei ".$errors." enthält ".$filename."  
" Gültigkeitsfehler.";
```

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The reason is that the translation process didn't switch the order of the variables.

Linguistic issues  
Handling variables

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```
printf(
    "There were %d validation errors in the file %s.",
    $errors, $filename )

printf(
    "Die Datei %s enthält %d Gültigkeitsfehler.",
    $errors, $filename )
```


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So next we try using a printf statement. This has the benefit that text and variable locators all sit within a single string, and the translator can access the items they want to reorder.

Unfortunately, this doesn't help, since PHP still replaces the variables in the string in the order of the variables cited in the following parameters to printf. This causes the 268 to be shown instead of the filename, by converting the integer value to a string. It is unable to find an integer value in the file name, and so presents us with the zero for the number of errors.

Linguistic issues  
Handling variables

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```
printf(
    "There were $errors validation errors in the file $filename."
)

printf(
    "Die Datei $filename enthält $errors Gültigkeitsfehler."
)
```

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By embedding the variable names directly in the printf string, as shown in this slide, we finally achieve the desired result in German.

Nota bene: Successful, or at the very least, cost effective localization in this case is down to the **designer/developer** understanding the potential pitfalls of various approaches to coding. It is not the job of the localization vendor to get this right. It needs to be done as the initial content is created!

You should also be very careful of the assumption that 'This doesn't affect me, since we don't translate the content I develop.' I have seen many, many cases where the thing being developed was later so successful that people wanted to take it to other regions, only to find that they ran into major difficulties because of issues with the translatability of the code or content. It's best to just do it right from the start.



Linguistic issues  
Handling variables

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```
printf(
    "There were %1$d validation errors in the file %2$s.",
    $errors, $filename )

printf(
    "Die Datei %2$s enthält %1$d Gültigkeitsfehler.",
    $errors, $filename )
```

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By the way, there is a way to produce the right effect while using the %d and %s variable markers in a PHP string, but it involves a slightly more complex syntax. This is shown in the above slide. The numeric markers refer to the relevant variable in the parameters that follow the string, even after reordering.

Linguistic issues  
Handling variables

W3C

При проверке файла myFirst.html была обнаружена 268 ошибка.

- 1 ошибка
- 2 ошибки
- 5 ошибок

```
printf(
    "При проверке файла $filename была обнаружена $errors
    ошибка."
)

printf(
    "Файл: $filename. Количество ошибок при проверке: $errors."
)
```

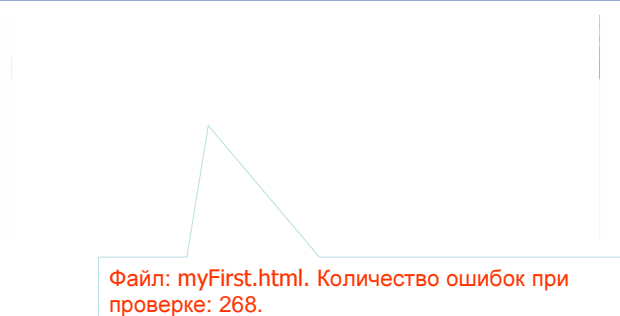
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So now we know how to code this type of text in PHP... or do we?

Let's think back to our example of how plurality works in Russian, and we realize that we still have a problem for that language. We only have a single string and it can only be translated one way – yet the Russian requires three variants of the word ошибка, depending on the number that precedes it.

Linguistic issues  
Handling variables

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1 ошибка  
2 ошибки  
5 ошибок

Файл: myFirst.html. Количество ошибок при проверке: 268.

```
printf(
    "При проверке файла $filename была обнаружена $errors
    ошибка."
)

printf(
    "Файл: $filename. Количество ошибок при проверке: $errors."
)
```

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To deal with this, the Russian translator would probably resort to a completely different structure for the text, essentially equivalent to "File: X. Validation errors: Y". This approach requires only one form of ошибка in the invariable string. This is an example of what I call a 'topic-comment' composite message.

Linguistic issues

Sentence-like composite messages

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The < > is on.


printer                      stacker


                         stapler options


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So we are beginning to see here that there are two distinct types of composite message. The first is based on a sentence-like approach, and the invariant string can be difficult to translate in some circumstances because of the need for agreement or different word mappings.

In the example above, 'The' should be translated 'el', 'la', or 'las' in Spanish, depending on what word follows it. Also the word 'on' should be translated using three different Spanish words (with different endings).

Linguistic issues

Topic-comment composite messages



Printer: on  
Stacker: on  
Stapler options: on

Impresora: conectada  
Apilador: encendido  
Opciones de grapado: activadas

<http://www.w3.org/International/articles/composite-messages/>

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The other approach to designing composite messages is what I like to call the 'topic-comment' approach: you state a topic, then you say something about it.

This approach works much better for the previous slide, since you each comment you associate with a topic can use a different word with the appropriate word endings.

There is a little more to this theory of composite messages than we have mentioned so far, but you can get more information from the W3C Internationalization site at the following URI:  
<http://www.w3.org/International/articles/composite-messages/> .

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Linguistic issues
Text string re-use

Connectado	-os -a -as
Encendido	-os -a -as
Activado	-os -a -as

Printer:

Stacker:

Stapler options:

On

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slide 22

I should, however, mention just one other point. Many designers/developers looking at the English topic-comment arrangement on the previous slide might think to themselves that they could save a little bandwidth by reducing all those instances of the word 'On' to a single string that is used for all comments, ie. they want to re-use strings.

Linguistic issues
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Text string re-use

```

<p>Printer: <?php print getStatus($printer);?></p>
<p>Stacker: <?php print getStatus($stacker);?></p>
<p>Stapler options: <?php print getStatus($sOptions);?></p>

<?php
function getStatus (device) {
    if ($device.status != 0) { return 'On'; }
    else { return 'Off'; }
}

?>

```

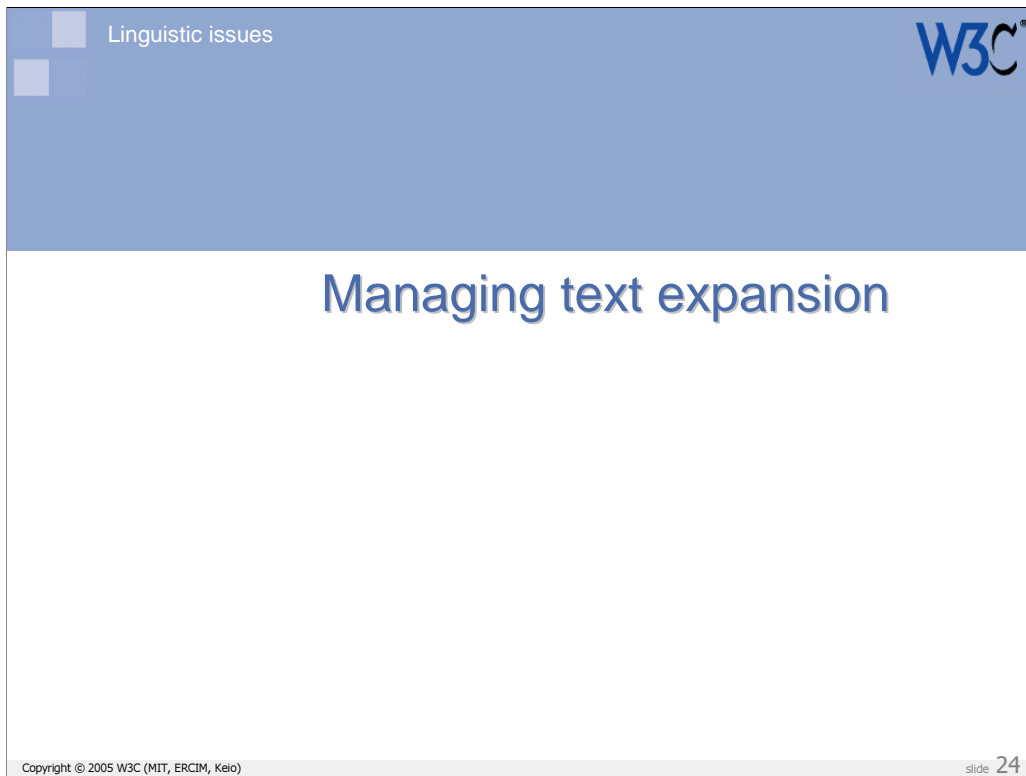
<http://www.w3.org/International/articles/text-reuse/>

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slide 23

Tempting as this idea may appear, it will unfortunately introduce insurmountable problems for translation, since the comment is likely to require different agreement forms at the least, and possibly different words altogether, depending on the context.

This slide shows an example of how such a problem may come about by returning the same text from a function for each comment.

Note that I do not want to rule out string re-use altogether – there are situations where it is a sensible approach. But re-use must not occur across different contexts. For more information about this, see the W3C Internationalization article at <http://www.w3.org/International/articles/text-reuse/> .



Linguistic issues

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## Managing text expansion

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This is a presentation slide. The top header is blue with the text 'Linguistic issues' and the W3C logo. The main content area is white with the title 'Managing text expansion' in blue. The footer is a light gray bar containing copyright information and the slide number '24'.

Now we switch to a very different topic area, that has more to do with the visual layout of the page than the composition of the text.



Linguistic issues

Graphics in fixed width boxes

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Idioma de la interfaz

☐ arabe

☐ inglés

☐ finlandés

☐ francés

☐ italiano

☐ japonés

☐ ruso

☐ español

☐ sueco

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slide 25

Let's assume that we want to implement a **fixed-width** box on our page.  
The text can expand downwards, but not sideways.

Let's also assume that we want a background with a nice gradient behind  
the title of the box, and that the background has a line across the bottom.

(This slide in Spanish has the title 'Interface Language', and a list of radio  
buttons to select a language.)

Linguistic issues

Graphics in fixed width boxes

W3C®

Bahasa Pengantar  
untuk Penelusuran

☐ Arab  
☐ Inggris  
☐ Finlandia  
☐ Perancis  
☐ Italia  
☐ Jepang  
☐ Rusia  
☐ Spanyol  
☐ Swedia

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slide 26

As our text expands during translation into Malay, the title occupies two lines. Unfortunately the graphic used for the gradient background is only one line deep, and things now begin to look a mess.

Linguistic issues

Graphics in fixed width boxes

W3C®

Bahasa Pengantar  
untuk Penelusuran

☐ Arab  
☐ Inggris  
☐ Finlandia  
☐ Perancis  
☐ Italia  
☐ Jepang  
☐ Rusia  
☐ Spanyol  
☐ Swedia

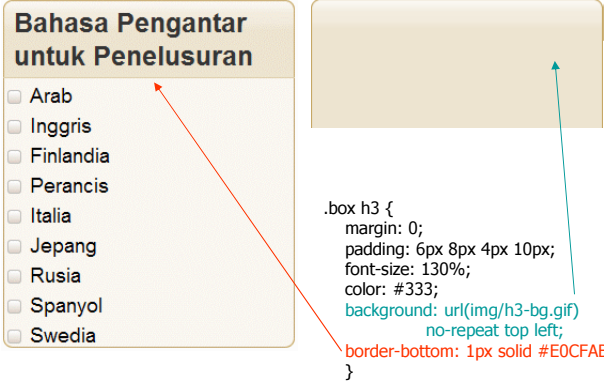
```
.box h3 {  
  margin: 0;  
  padding: 6px 8px 4px 10px;  
  font-size: 130%;  
  color: #333;  
  background: url(img/h3-bg.gif)  
             no-repeat top left;  
  border-bottom: 1px solid #E0CFAB;  
}
```

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A way to approach this issue is to use a graphic that is three or four lines deep behind the title. By attaching the graphic using the CSS background property, only the amount needed to view the title will actually be shown.

Linguistic issues
W3C

Graphics in fixed width boxes



The screenshot shows a web form with a title 'Bahasa Pengantar untuk Penelusuran' and a list of languages: Arab, Inggris, Finlandia, Perancis, Italia, Jepang, Rusia, Spanyol, and Swedia. A red arrow points from the bottom border of the heading to the CSS code. A blue arrow points from the background image in the CSS code to the background of the form.

```

.box h3 {
  margin: 0;
  padding: 6px 8px 4px 10px;
  font-size: 130%;
  color: #333;
  background: url(img/h3-bg.gif)
    no-repeat top left;
  border-bottom: 1px solid #E0CFAB;
}

```

Bulletproof Web Design, Dan Cederholm

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slide 28

To get the line to appear in the right place, we simply create it as the bottom border of the heading.

This example uses a technique (and the exact same code and graphic) described in Dan Cederholm's book, *Bulletproof Web Design* (although the text is borrowed from Google's language preferences). This is significant! Dan is not writing about internationalization per se – he is more concerned with people pumping up the text size for accessibility reasons. It just so happens, however, that the same approach helps with localizability.

This is an example that you don't necessarily have to learn new information to deal with internationalization issues – just following existing best practices can be the key in many cases. Note again, however, that we are still talking about the **design and development** of content – not about work that the localizers will do!

Dan's book contains several other recommendations that will benefit internationalization.

Linguistic issues  
Language links
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Preferences

[Preferences Help](#) | [About Google](#)

Save your preferences when finished and return to search.
 Save Preferences

**Global Preferences** (changes apply to all Google services)

**Interface Language**    Display Google tips and messages in: English

If you do not find your native language in the pulldown above, you can help Google create it through our [Google in Your Language program](#).

**Search Language**

☒ Search for pages written in any language ([Recommended](#)).

☐ Search only for pages written in these language(s):

<input type="checkbox"/> Arabic	<input type="checkbox"/> English	<input type="checkbox"/> Indonesian	<input type="checkbox"/> Romanian
<input type="checkbox"/> Bulgarian	<input type="checkbox"/> Estonian	<input type="checkbox"/> Italian	<input type="checkbox"/> Russian
<input type="checkbox"/> Catalan	<input type="checkbox"/> Finnish	<input type="checkbox"/> Japanese	<input type="checkbox"/> Serbian
<input type="checkbox"/> Chinese (Simplified)	<input type="checkbox"/> French	<input type="checkbox"/> Korean	<input type="checkbox"/> Slovak
<input type="checkbox"/> Chinese (Traditional)	<input type="checkbox"/> German	<input type="checkbox"/> Latvian	<input type="checkbox"/> Slovenian
<input type="checkbox"/> Croatian	<input type="checkbox"/> Greek	<input type="checkbox"/> Lithuanian	<input type="checkbox"/> Spanish
<input type="checkbox"/> Czech	<input type="checkbox"/> Hebrew	<input type="checkbox"/> Norwegian	<input type="checkbox"/> Swedish
<input type="checkbox"/> Danish	<input type="checkbox"/> Hungarian	<input type="checkbox"/> Polish	<input type="checkbox"/> Turkish
<input type="checkbox"/> Dutch	<input type="checkbox"/> Icelandic	<input type="checkbox"/> Portuguese	

**SafeSearch Filtering**

[Google's SafeSearch](#) blocks web pages containing explicit sexual content from appearing in search results.

☐ Use strict filtering (Filter both explicit text and explicit images)  
☒ Use moderate filtering (Filter explicit images only - default behavior)  
☐ Do not filter my search results.

**Number of Results**

Google's default (10 results) provides the fastest results.

Display: 10 results per page.

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slide 29

Note, in passing, an issue related to the Google text I used in the previous example. The dialogue allowed you to select a different language for the user interface from a pull-down list, presumably assuming that your reason for changing was that you couldn't read the current language.

The issue for me is that the names of all the languages are in the language of the current page. Let's assume, for example, that a curious person wanted to see what the interface looked like in Persian, so they selected that language from the list and clicked on the 'Save Preferences' button.

[illegible]

Assuming that they would be able to find their way back to the appropriate dialogue box to get back to English (which would require them to remember which link to hit on the thankfully uncluttered Persian Google home page), that they can remember which is the required select list, and that they can do so in spite of the mirror-imaging of the page when using Arabic script, they would then be faced with what you see on the next slide.

Linguistic issues
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Language links

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Google 2005®
slide 31

Note that the names of languages are all in Persian, and are sorted by Persian rules.

Which selection would get you back to English ??

(Hint: if you want to explore like this, use a different tab or window for your explorations, and leave the original dialogue available in another for when you want to reset to your current language.)

Of course, the point is really that a Persian person taken to the English site may have as much trouble finding their way to the appropriate user interface language as the curious explorer does in getting back. In my opinion it would help a great deal to write each language name in its own script and language. You can read more about that in the W3C Internationalization article at <http://www.w3.org/International/questions/qa-navigation-select>.

Linguistic issues

Form field label positioning

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Global settings

Interface language	English ▾
Search language	English ▾
Number of results	10 ▾
<input type="button" value="Save preferences"/>	

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slide 32

Lets take a moment to explore another potential issue related to the length of text in translation.

Let's continue to assume a situation where text appears in a fixed width box. We will apply the same approach we discussed earlier to deal with the title of the box. The issue this time will be that we have used a table to apply form labels to the left side of the form entry field to which they apply. Our initial source text is in English.



Linguistic issues
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## Form field label positioning

**Global settings**

Interface language English ▼

Search language English ▼

Number of results 10 ▼

**Acuan Umum**

Bahasa Pengantar di Antar Muka Ingriss ▼

Bahasa Pengantar untuk Penelusuran Ingriss ▼

Jumlah Hasil Penelusuran 10 ▼

**Allgemeine Voreinstellungen**

Sprache der Benutzeroberfläche Englisch ▼

Suchsprache Englisch ▼

Anzahl der Ergebnisse 10 ▼

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slide 33

The English looks nice enough. The Malay, on the other hand, looks pretty ugly. The large expansion factor produces unfortunate stacking of the text on the left, and large white spaces to the right. Although the box expands vertically to hold all the text, we are wasting a lot of space and decreasing the amount of information that will appear in the reader's initial screen (you can imagine that this would be compounded by other fixed width boxes on the page).

With the German translation we have a different problem. The long word Benutzeroberfläche doesn't wrap, and so pushes the select boxes beyond the width of the fixed box container. This has the potential to badly affect the layout of other parts of the screen.

Linguistic issues

Form field label positioning

W3C<sup>®</sup>

Global settings

Interface language

English

Search language

English

Number of results

10

Save preferences

Acuan Umum

Bahasa Pengantar di Antar Muka

Ingriss

Bahasa Pengantar untuk Penelusuran

Ingriss

Jumlah Hasil Penelusuran

10

Simpan Acuan

Allgemeine Voreinstellungen

Sprache der Benutzeroberfläche

Englisch

Suchsprache

Englisch

Anzahl der Ergebnisse

10

Einstellungen speichern


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slide 34

You may want to consider avoiding table cells in such constrained circumstances. This slide shows how the text would look if the input fields were just in a paragraph with the label text.

All the boxes now look fine, and although there is a very slight increase in vertical height overall, we have removed the problems seen with the Malay and German text on the previous slide.

Let's note, again, that this is down to the way the page is **designed/developed**, not the way it is localized. That's a fundamental message of this presentation. Internationalization during design and development removes significant barriers to deploying your content globally.



# Separating content & presentation

- Linguistic issues
- Separating content & presentation
- Cultural issues
- What this means to me

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Now we are going to look at the benefits to localization of another good design/development best practice that you would hopefully adopt anyway: the separation of content, presentation and behaviour.

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## Content ( XHTML )

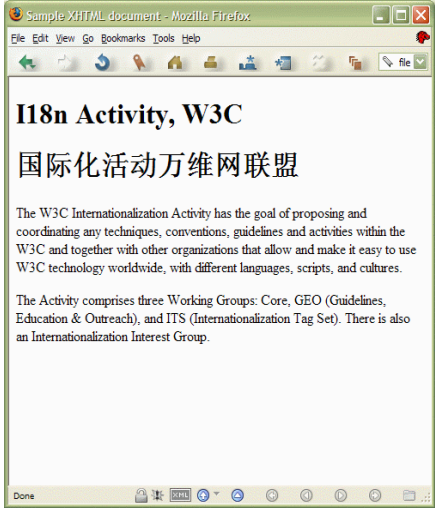
```

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=utf-8"/>
    <title>About the W3C I18n Activity</title>
    <style type="text/css" src="mystyling.css" />
  </head>

  <body>
    <h1>I18n Activity, W3C</h1>
    <div class="international-text" xml:lang="zh-Hans"
          lang="zh-Hans">国际化活动万维网联盟</div>
    <div class="description">
      <p>The W3C Internationalization Activity has the goal of proposing
        and coordinating any techniques, conventions, guidelines and
        activities within the W3C and together with other organizations
        that allow and make it easy to use W3C technology worldwide,
        with different languages, scripts, and cultures.</p>
      <p>The Activity comprises three Working Groups: Core, GEO
        (Guidelines, Education & Outreach), and ITS (Internationalization
        Tag Set). There is also an Internationalization Interest Group.</p>
    </div>
  </body>
</html>


```




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slide 36

Some HTML is shown on the left. There is no presentational information in the HTML – which is as it should be.

A browser would use default styling to make headers larger and add space between paragraphs.





Separating content & presentation  
 The basics

### Content ( XHTML )

```

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8"/>
  <title>About the W3C I18n Activity</title>
  <style type="text/css" src="mystyling.css" />
</head>

<body>
  <h1>I18n Activity, W3C</h1>
  <div class="international-text" xml:lang="zh-Hans"
        lang="zh-Hans">国际化活动万维网联盟</h1>
  <div class="description">
    <p>The W3C Internationalization Activity has the goal of proposing
    and coordinating any techniques, conventions, guidelines and
    activities within the W3C and together with other organizations
    that allow and make it easy to use W3C technology worldwide,
    with different languages, scripts, and cultures.</p>
    <p>The Activity comprises three Working Groups: Core, GEO
    (Guidelines, Education & Outreach), and ITS (Internationalization
    Tag Set). There is also an Internationalization Interest Group.</p>
  </div>
</body>
</html>

```

### Presentation (CSS)

```

body {
  background: white;
  color: black;
  font-family: serif;
  font-size: 1em;
}

h1 {
  font-size: 240%;
}

div.international-text {
  font-family: MingLiu, sans-serif;
  font-size: 240%;
}

p {
  margin-top: 1em;
}

```

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 slide 37

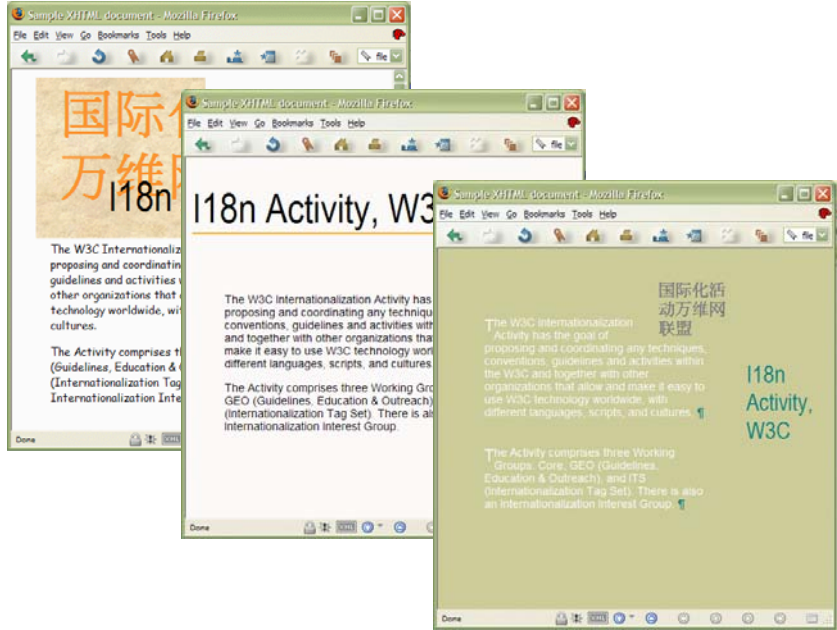
To make the styling more interesting, you can use a CSS style sheet.

To the right is some CSS code that applies styling to the HTML.

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## Separating content & presentation

### The basics



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slide 38

Each of these windows shows EXACTLY the same HTML file. The changes made to the CSS file produced three very different presentations of that basic content.

This is particularly useful for changing the presentational aspects of a site or group of pages. You typically only need to edit a single CSS file, rather than editing all the code of each HTML file.

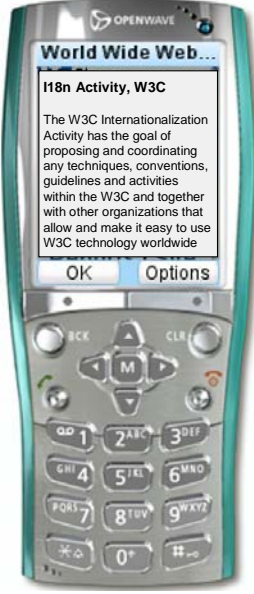
This can also be beneficial for localization, since typographic approaches, colors, etc, may need to be changed for different locales. Making such changes in the CSS is much easier than adapting the HTML.

■

■

Separating content & presentation  
The basics

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Remember, also, that the Mobile Web is becoming increasingly important these days – and may be especially so in developing countries in the future. This means that content needs to be adapted to fit on handheld devices with smaller screens.

Again, this would ideally be achieved by styling the content, rather than writing a completely separate Web.

You should not make assumptions, when creating content, that you know what it will look like when finally displayed. These days, it may well be displayed in a number of different formats.

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Separating content & presentation  
Style issues for Japanese

- ◆ problems of resolution to support bold and italics in small CJK characters on-screen
- ◆ different ways of emphasizing text in Japanese (wakiten & amikake)


これは日本語です。

これは日本語です。

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Here are some ways in which typographic differences may appear between language versions of the same content. We take the example of Japanese.




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Separating content & presentation

Style issues for Japanese

- ◆ problems of resolution to support bold and italics in small CJK characters on-screen
- ◆ different ways of emphasizing text in Japanese (wakiten & amikake)
- ◆ different fonts need to be used for font-family assignments
- ◆ no upper- vs. lower-case distinction in Japanese
- ◆ no convention of distinguishing between proportional and mono-spaced fonts for Japanese scripts
- ◆ line heights, paraleading, and possibly font-size may need to be adapted, since Japanese characters are more complicated and square than eg. Latin
- ◆ wrapping rules may need adjustment, since there are no spaces between words in Japanese

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Separating content & presentation  
Think semantic markup

Making the World Wide Web *worldwide*.

`<p>Making the World Wide Web <i>worldwide</i></p>`

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Try to use semantically valid markup where it exists.

Avoid using the `<i>` element, use the `<em>` element instead, if you are wanting to apply a different look because the text is emphasized.

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Separating content & presentation  
Think semantic markup


Making the World Wide Web *worldwide*.

```
<p>Making the World Wide Web <em>worldwide</em></p>
```



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Not only is it better for localization to express the idea or semantics in the content, and leave the presentation to the style sheet, it will also improve your original text by making you more aware of what you are actually doing. (In other words, this is another situation where good authoring practise benefits localization.)

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Separating content & presentation  
Think semantic markup

See the **System Administrator Guide** for an example of re-use.


`<p>See the <span class="bold">System Administrator Guide</span> for an example of re-use.</p>`

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The same applies to use of class names – for example, document conventions such as representation of referenced resources. When using class annotations or microformats, don't describe the expected presentational rendering, describe the function of the text.




Separating content & presentation  
Think semantic markup



See the **System Administrator Guide** for an example of re-use.

<p>See the <span class="doctitle">System Administrator Guide</span>  
for an example of re-use.</p>

doctitle  
chaptertitle  
inputsequence  
etc.



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[illegible]

You should also consider separation of content and presentation when adding scripting. Let's suppose that we wanted to load some JavaScript after this basic test page has loaded which would automatically add a list of tests on the page to the top right corner. (We may actually want to add links to these tests, but I have resisted that temptation so that the following slides will contain the code examples.)

Separating content & presentation
W3C

## Don't forget your scripting

```

function makeList () {
    var headings = document.getElementsByTagName('h2');
    var div = document.createElement('div');
    div.style.cssFloat = 'right';
    div.style.styleFloat = 'right';
    div.style.width = '20%';
    div.style.padding = '1em';
    div.style.border = '1px solid teal';
    div.style.backgroundColor = '#FFCC99';
    div.style.fontSize = '90%';
    div.style.margin = '1em';
    div.style.color = '#996633';
    var title = div.appendChild(document.createElement('div'));
    title.style.fontWeight = 'bold';
    title.appendChild(document.createTextNode('Tests on this page:'));
    for (i=0;i<headings.length;i++) {
        var test = div.appendChild(document.createElement('p'));
        test.appendChild(document.createTextNode(headings[i].childNodes[0].data));
    }
    body = document.getElementsByTagName('body')[0];
    body.insertBefore( div, body.firstChild );
}

```

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slide 47

Here is a simple function that could be used to add the required text. It creates a div, gets a list of level two headings, and adds the text of the headings to the list.

```

function makeList () {
  var headings = document.getElementsByTagName('h2');
  var div = document.createElement('div');
  div.style.cssFloat = 'right';
  div.style.styleFloat = 'right';
  div.style.width = '20%';
  div.style.padding = '1em';
  div.style.border = '1px solid teal';
  div.style.backgroundColor = '#FFCC99';
  div.style.fontSize = '90%';
  div.style.margin = '1em';
  div.style.color = '#996633';
  var title = div.appendChild(document.createElement('div'));
  title.style.fontWeight = 'bold';
  title.appendChild(document.createTextNode('Tests on this page:'));
  for (i=0;i<headings.length;i++) {
    var test = div.appendChild(document.createElement('p'));
    test.appendChild(document.createTextNode(headings[i].childNodes[0].data));
  }
  body = document.getElementsByTagName('body')[0];
  body.insertBefore( div, body.firstChild );
}

```

Note how we are adding style information directly to the DOM while running this script. This is really obvious in this example, since there is such a lot of it. It is particularly tempting to do this sort of thing if you just want to add a single style effect, such as bolding, to text.



Separating content & presentation
W3C®

## Don't forget your scripting

```
function makeList () {
    var headings = document.getElementsByTagName('h2');
    var div = document.createElement('div');
    div.setAttribute( 'id', 'testList' );
    var title = div.appendChild(document.createElement('div'));
    title.appendChild(document.createTextNode('Tests on this page:'));
    for (i=0;i<headings.length;i++) {
        var test = div.appendChild(document.createElement('p'));
        test.appendChild(document.createTextNode(headings[i].childNodes[0].data));
    }
    body = document.getElementsByTagName('body')[0];
    body.insertBefore( div, body.firstChild );
}
```

```
div#testList {
    float: right;
    width: 20%;
    padding: 1em;
    border: 1px solid teal;
    background-color: #FFCC99;
    font-size: 90%;
    margin: 1em;
    color: #996633;
}

div#testList div {
    font-weight: bold;
}
```

see also: [Dom Scripting, Jeremy Keith](#)

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slide 49

This version of the same function shows a much better approach. We assign an id attribute to the box, then move all the styling information to a CSS file, referencing the markup via the id. This makes the code much cleaner and makes it easier to manage the styling.

Again, this technique is recommended as a standard best practice in Jeremy Keith's book *Dom Scripting* (which contains many other useful ideas along similar lines). It is another good example of how good web design benefits localization.



# Cultural issues


- Linguistic issues
- Separating content & presentation
- Cultural issues
- What this means to me

- Formatting & reading data
- Symbolism & examples
- Color
- Differing approaches

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slide 50

This section will look at a very different set of issues – those related to cultural differences in design.



Cultural issues

## Formatting & reading data

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Cultural issues

Formatting & reading data

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*Россия*  
*г. Пермь 614055*  
*ул. Крупской 93-82*  
*Селивановой Юлии*

Country: United States

First name:

Last name:

Address:

City:

State: AZ

Zip code:

Telephone: ( )


Application date:

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slide 52

Russian and Japanese addresses are written from the general to the specific, top to bottom. You may need to figure out how to produce these different orderings for forms.

Also, the name of the Russian person above is in the dative case (expressing the idea of 'to the person'). How will you deal with that?




Cultural issues

## Formatting & reading data

- Numeric formats
- Calendars & date formats
- Address formats
- Name conventions
- Time formats
- Currency formats
- List separators
- Telephone numbers
- etc....

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There are a number of ways in which formats differ around the world. Note that recognizing information input into general forms can be more difficult than producing form templates in the right way.



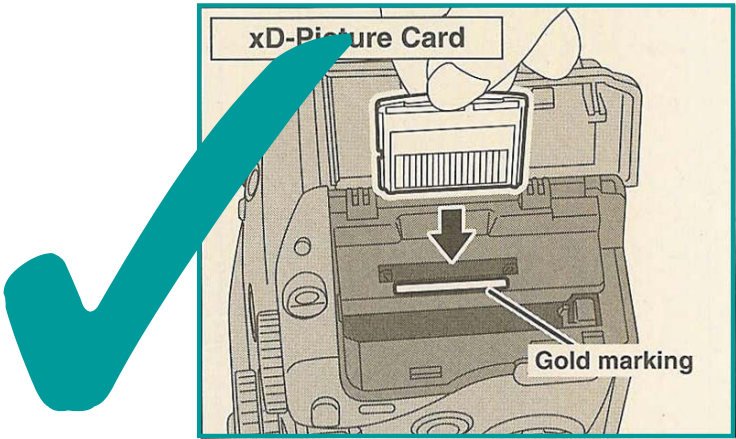
Cultural issues

## Symbolism & examples

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Cultural issues  
Symbolism & examples

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This check symbol means 'correct' or 'ok' in many countries. In some countries, however, such as Japan, it can indicate 'incorrect'. Japanese often convert check marks to circles (their symbol for 'correct') as part of the localization process.



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slide 56

The circles in the columns of this board indicate that space is available, not that there are 0 seats left. It is the equivalent of the check mark.



Cultural issues  
Symbolism & examples

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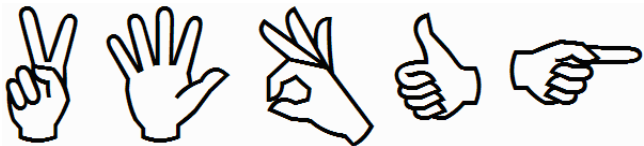
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This illustration of sports items is not representative of sports played in the UK, and may need to be changed.

Cultural issues

Symbolism & examples

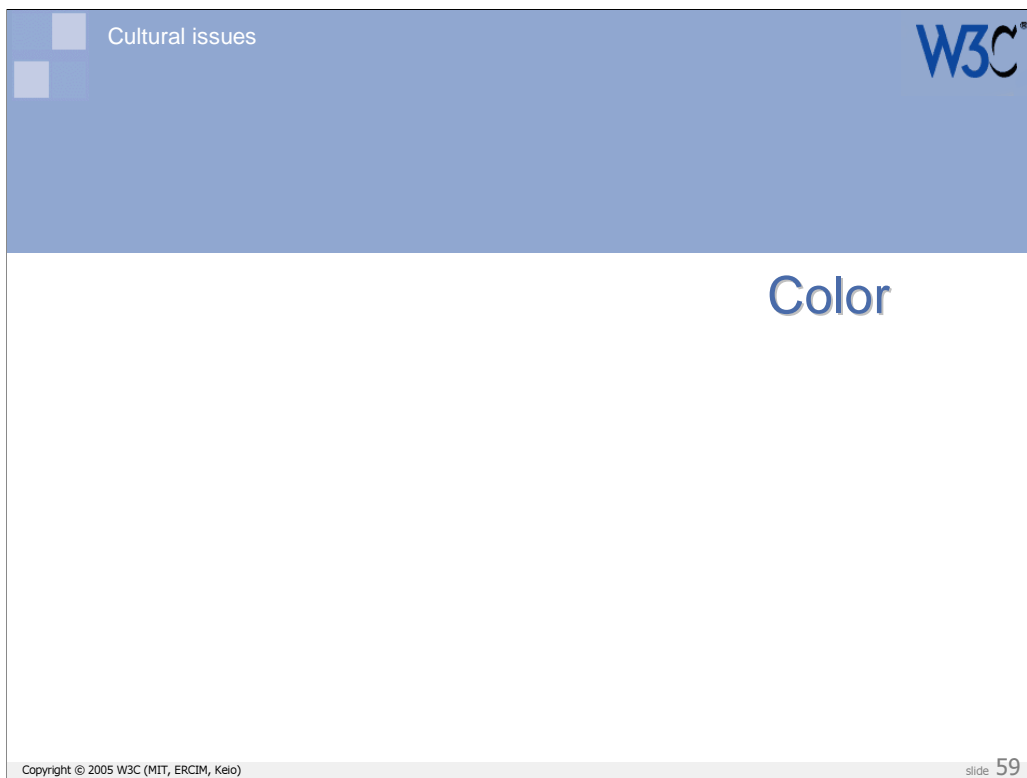
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slide 58

Gestures and sometimes body language can often give completely the wrong message, and should be used with extreme care.



A presentation slide with a blue header bar. The header bar contains the text "Cultural issues" on the left and the W3C logo on the right. The main body of the slide is white and contains the word "Color" in blue text. The footer is a light gray bar with copyright information on the left and "slide 59" on the right.

Cultural issues

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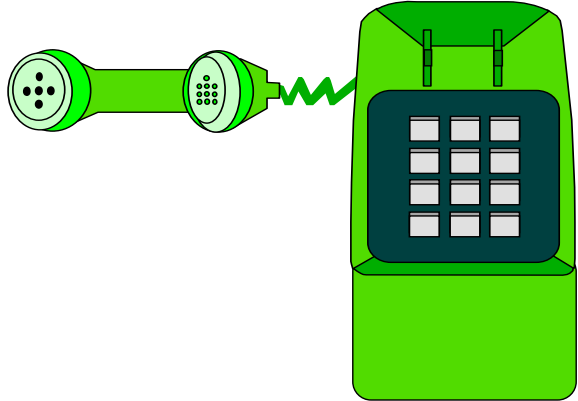
Color

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Cultural issues

Color

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A green public telephone booth with a handset. The handset is green with a silver-colored circular face containing four small black dots. The booth is green with a silver-colored keypad area in the center. The keypad is a 3x3 grid of squares, each containing a small black dot. The handset is connected to the booth by a coiled green cord.

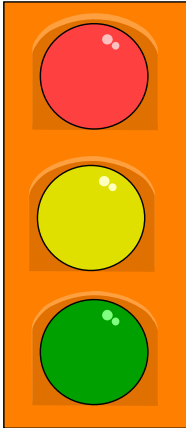
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This phone is likely to be perceived immediately as a public telephone in Japan, due to the conventional use of the green color there. In most other parts of the world, this cue is missing. So colors have conventional roles that differ from culture to culture.

Cultural issues

Color

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slide 61

Color names also differ from culture to culture, dependent on context. British people often call the middle light here amber, whereas Americans call it yellow. Japanese speaking English will often refer to the bottom light as blue.

Cultural issues

Color




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slide 62

The affective or emotional nature of color can also vary from culture to culture.

Cultural issues  
Color

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slide 63

Wearing a black dress for a wedding is not the issue in Japan that it might be in the UK.

These differences may also affect the perceptions of your web content in different places around the world.



This slide features a blue header bar at the top. On the left side of the header, there are three small squares of increasing size, followed by the text "Cultural issues". On the right side of the header is the W3C logo. The main body of the slide is white and contains the title "Differing approaches" in a large, blue, sans-serif font. At the bottom of the slide, a thin grey bar contains the copyright text "Copyright © 2005 W3C (MIT, ERCIM, Keio)" on the left and "slide 64" on the right.

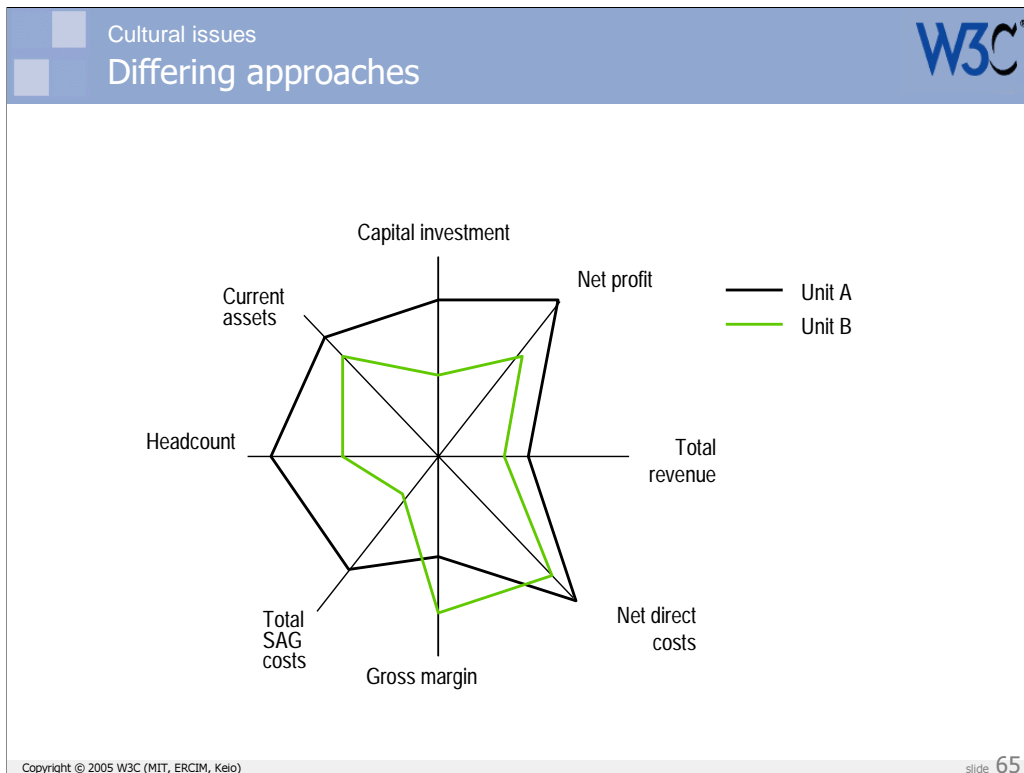
Cultural issues

W3C®

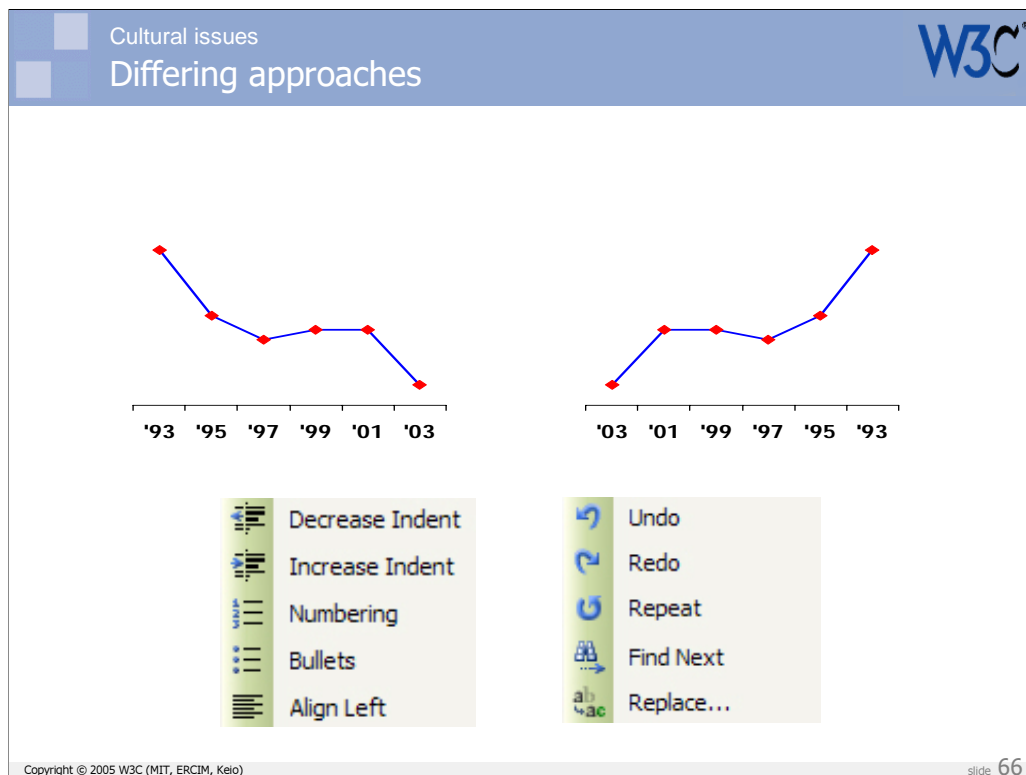
## Differing approaches

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People do things in different ways in different parts of the world. For example, Lotus 1-2-3 was relaunched in Japan with the radar chart after it was discovered that this was a very common way of representing comparative data there.



In the Middle East, you may find that tables, spreadsheets, collated pictures and the like need to flow right to left, rather than left to right.

Some graphics with directional bias may need to be mirrored or changed for a predominantly right-to-left context.

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Cultural issues  
Differing approaches

"... one Latin American teacher recently complained to me that the US-manufactured and well-translated educational software currently being used in his country's primary schools presupposed 'solitary problem solvers', whereas his culture stressed collective problem-solving."

Kenneth Keniston,  
Language International, May 1996

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Then there are more fundamental issues about whether the application, product or solution you are developing will actually fit into the foreign culture at all.

Cultural issues  
Differing approaches

W3C

YAHOO! UK & IRELAND

Web Site Directory Sites organised by subject.

<b>Arts &amp; Humanities</b> <a href="#">Literature</a> , <a href="#">History</a> , <a href="#">Photography</a> ...	<b>News &amp; Media</b> <a href="#">Newspapers</a> , <a href="#">Weather</a> , <a href="#">TV</a> ...
<b>Business &amp; Economy</b> <a href="#">B2B</a> , <a href="#">Shopping</a> , <a href="#">Investments</a> , <a href="#">Property</a> ...	<b>Recreation &amp; Sport</b> <a href="#">Sport</a> , <a href="#">Hobbies</a> , <a href="#">Travel</a> , <a href="#">Motoring</a> ...
<b>Computers &amp; Internet</b> <a href="#">Internet</a> , <a href="#">Reviews</a> , <a href="#">Software</a> , <a href="#">Games</a> ...	<b>Reference</b> <a href="#">Maps</a> , <a href="#">Dictionaries</a> , <a href="#">Phone Numbers</a> ...
<b>Education</b> <a href="#">UK</a> , <a href="#">Ireland</a> , <a href="#">Universities</a> ...	<b>Regional</b> <a href="#">UK</a> , <a href="#">Ireland</a> , <a href="#">Countries</a> ...
<b>Entertainment</b> <a href="#">Humour</a> , <a href="#">Movies</a> , <a href="#">Music</a> , <a href="#">Actors</a> ...	<b>Science</b> <a href="#">Animals</a> , <a href="#">Geography</a> , <a href="#">Engineering</a> ...
<b>Government</b> <a href="#">UK</a> , <a href="#">Ireland</a> , <a href="#">Politics</a> , <a href="#">Law</a> ...	<b>Social Science</b> <a href="#">Economics</a> , <a href="#">Languages</a> , <a href="#">Psychology</a> ...
<b>Health</b> <a href="#">Medicine</a> , <a href="#">Drugs</a> , <a href="#">Diseases</a> , <a href="#">Fitness</a> ...	<b>Society &amp; Culture</b> <a href="#">People</a> , <a href="#">Food &amp; Drink</a> , <a href="#">Environment</a> , <a href="#">Sexuality</a> ...

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The following slides show how Yahoo adapts the content on its various local home pages, rather than just translating it. This may be something you also need to consider.

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**Guide Web** - Classement thématique de sites Web

[Suggérer un site](#)

<p><b><u>Actualités et médias</u></b>  <a href="#">Journaux</a>, <a href="#">Télévision</a>, <a href="#">Météo</a>...</p> <p><b><u>Commerce et économie</u></b>  <a href="#">B2B</a>, <a href="#">Shopping</a>, <a href="#">Emploi</a>, <a href="#">Immobilier</a>...</p> <p><b><u>Informatique et Internet</u></b>  <a href="#">Internet</a>, <a href="#">Logiciels</a>, <a href="#">Fonds d'écran</a>...</p> <p><b><u>Santé</u></b>  <a href="#">Diététique</a>, <a href="#">Médecine</a>, <a href="#">Thalasso</a>...</p> <p><b><u>Enseignement et formation</u></b>  <a href="#">Primaire</a>, <a href="#">Secondaire</a>, <a href="#">Supérieur</a>...</p> <p><b><u>Institutions et politique</u></b>  <a href="#">Ministères</a>, <a href="#">Droit</a>, <a href="#">Politique</a>...</p> <p><b><u>Sciences et technologies</u></b>  <a href="#">Animaux</a>, <a href="#">Astronomie</a>, <a href="#">Physique</a>...</p>	<p><b><u>Sports et loisirs</u></b>  <a href="#">Foot</a>, <a href="#">Tourisme</a>, <a href="#">Auto/Moto</a>, <a href="#">Jeux</a>...</p> <p><b><u>Art et culture</u></b>  <a href="#">Littérature</a>, <a href="#">Cinéma</a>, <a href="#">Musique</a>, <a href="#">BD</a>...</p> <p><b><u>Divertissement</u></b>  <a href="#">Tests/Quiz</a>, <a href="#">Loteries</a>, <a href="#">Humour</a>, <a href="#">Sorties</a>...</p> <p><b><u>Classement géographique</u></b>  <a href="#">Pays</a>, <a href="#">Europe</a>, <a href="#">France</a>, <a href="#">Paris</a>...</p> <p><b><u>Références et annuaires</u></b>  <a href="#">Dictionnaires</a>, <a href="#">Annuaire</a>, <a href="#">Cartes/Atlas</a>...</p> <p><b><u>Société</u></b>  <a href="#">Enfants</a>, <a href="#">Gastronomie</a>, <a href="#">Rencontres</a>...</p> <p><b><u>Sciences humaines</u></b>  <a href="#">Archéologie</a>, <a href="#">Histoire</a>, <a href="#">Psychologie</a>...</p>
---	---

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Cultural issues
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## Differing approaches



The screenshot shows the Yahoo! Japan homepage with the 'Yahoo!カテゴリ' (Yahoo! Categories) section. An orange arrow points to the '芸術と人文' (Arts and Culture) category. The categories are listed in two columns:

Yahoo!カテゴリ	サイトの推薦
<a href="#">エンターテインメント</a> 映画, 音楽, 芸能人, コミック, 占い ...	<a href="#">メディアとニュース</a> テレビ, ラジオ, 新聞, 雑誌 ...
<a href="#">趣味とスポーツ</a> アウトドア, ゲーム, 車, スポーツ, 旅 ...	<a href="#">ビジネスと経済</a> ショッピング, B2B, 雇用, 金融 ...
<a href="#">芸術と人文</a> 写真, 建築, 美術館, 歴史, 文学 ...	<a href="#">各種資料と情報源</a> 図書館, 辞書, 郵便, 電話番号 ...
<a href="#">生活と文化</a> 子ども, 環境, グルメ, 障害者 ...	<a href="#">コンピュータとインターネット</a> ハードウェア, ソフトウェア, WWW ...
<a href="#">教育</a> 大学, 専門学校, 小中高, 資格 ...	<a href="#">政治</a> 政治, 行政, 国会, 法 ...
<a href="#">健康と医学</a> 病院, 病気, ダイエット ...	<a href="#">自然科学と技術</a> 動物, エコロジー, 地球, 天文, 工学 ...
<a href="#">社会科学</a> 経済学, 社会学, 言語, 政治学 ...	<a href="#">地域情報</a> 日本の地方, 世界の国 ...

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Cultural issues
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## Differing approaches

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# What this means to me

- Linguistic issues
- Separating content & presentation
- Cultural issues
- What this means to me

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What this means to me  
Internationalization means:

- using a Quality approach to reduce the overall cost and time to market/release of multinational deliverables
- **designing** into the deliverable or product an internationalized base, and a modular and easily adaptable architecture
- not always doing extra work – maybe just working in a better way

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What this means to me  
Recommendations

- be aware that well localized deliverables and content begins with **you**, not the localization folks
- keep presentation and content separate
- explore possible cultural differences and get user feedback before extending your content into the international arena
- find out about good internationalization practice

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Remember also that, even though you think you don't deal with content that will be internationalized now, you may well need to in the future.

What this means to me  
W3C can help



The W3C is trying to provide useful advice at  
<http://www.w3.org/International/>

We could always do with help and support for this.

What this means to me  
The Web needs your help

- ◆ this is your Web – not the W3C's – if something isn't right, get involved to fix it

Thank you  
<http://www.w3.org/International/>

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