



Global Design: Characters, Language, and More

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W3C Internationalization Activity Lead

W3C Internationalization (I18n) Activity - Mozilla Firefox

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http://www.w3.org/International/

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Home page

The W3C Internationalization (I18n) Activity works with W3C working groups and liaises with other organizations to make it possible to use Web technologies with different languages, scripts, and cultures. From this page you can find articles and other resources about Web internationalization, and information about the groups that make up the Activity.

More ...

Recent highlights

- 16 April 08 [Updated Working Draft: Web Services Internationalization \(WS-I18N\)](#)
- 16 April 08 [First Public Working Draft: Requirements of Japanese Text Layout](#)
- 11 April 08 [New article: Migrating to Unicode](#)
- 26 March 08 [Internationalization Tag Set Interest Group Launched](#)
- 25 February 08 [I18n Core Working Group helps gathering requirements on Japanese Layout](#)
- 14 February 08 [New Working Group Note: Best Practices for XML Internationalization](#)

All news

16 April 2008

Updated Working Draft: Web Services Internationalization (WS-I18N)

Read the Working Draft

The Internationalization Core Working Group has published a Working Draft of Web Services Internationalization (WS-I18N). This document describes enhancements to SOAP messaging to provide internationalized and localized operations using locale and international preferences. These mechanisms can be used to accommodate a wide variety of development models for international usage.

Editors: Addison Phillips, Mary Trumble (until September 2005), Felix Sasaki
[search keys: tr-ws-i18n]

Edit...

Categories: Highlight, New draft

First Public Working Draft: Requirements of Japanese Text Layout

Read the Working Draft

Participants from four W3C Groups CSS, Internationalization Core, SVG and XSL Working Groups as part of the Japanese Layout Task Force published Requirements of Japanese Text Layout. This document describes requirements for general Japanese layout realized with technologies like CSS, SVG and XSL-FO. The document is mainly based on a standard for Japanese layout, JIS X 4051. However, it also addresses areas which are not covered by JIS X 4051. [Japanese version](#) is also available.

Editors: Toshi Kobayashi, Yasuhiro Anan. [search keys: tr-jreq]

Edit...

Categories: Highlight, Update, New draft

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http://www.w3.org/International/

Outline

Character encoding: What's that all about?

Characters: What do I need to do?

Characters: Using escapes

Language: Two types of declaration

Language: The new language tag values

Text size

Navigating to localized pages



Character encoding: What's that all about?



Character encoding

The Enigma



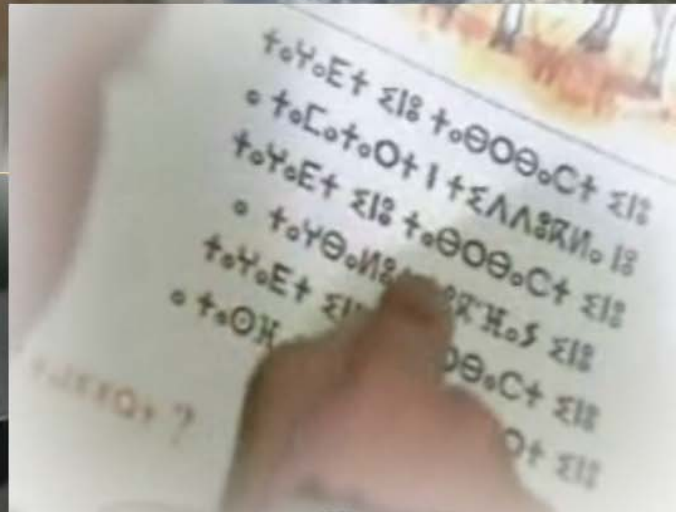
Photo by David Blaikie



Character encoding

Berber





http://www.dailymotion.com/video/x1rh6m_tifinagh_creation



← Character set

。 ⊖ ⊕ × ∂ ∇ √ ∧ ∨
E ∃ ÷ H R ∴ ∟ ⊙ ∅
∴ ∠ ∪ × ∴ ∟ ∴ ∞ I
X # H C I ≠ ! ∂ ∴ ∅
Q √ ∴ ∴ ∅ ∅ ∅ + X
∅ E Δ ∴ ∴ ∴ ∴ ∴



Coded character set

| | 0 | 1 | 2 | 3 |
|---|---|---|---|---|
| 0 | • | ⊙ | ≠ | Δ |
| 1 | ⊖ | ∅ | ↓ | ⊔ |
| 2 | ⊕ | ∴ | ⋮ | ⋈ |
| 3 | ⊗ | ⋈ | ∴ | ⊗ |
| 4 | ⊗ | ⋈ | ⊙ | ⋈ |
| 5 | ⊗ | ⊗ | ⊙ | ⊗ |
| 6 | ⊗ | ⊗ | ⊙ | |
| 7 | ⊗ | ⊗ | ⊙ | |
| 8 | ⊗ | ⊗ | ⊙ | |
| 9 | ⊗ | ⊗ | ⊙ | |
| A | ⊗ | ⊗ | ⊙ | |
| B | ⊗ | ⊗ | ⊙ | |
| C | ⊗ | ⊗ | ⊙ | |
| D | ⊗ | ⊗ | ⊙ | |
| E | ⊗ | ⊗ | ⊙ | |
| F | ⊗ | ⊗ | ⊙ | |

Coded character set

Code point

33 (hexadecimal)

52 (decimal)



Code pages

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|----|---|---|---|---|---|
| 0 | | | | 0 | @ | P | ` | |
| 1 | | | ! | 1 | A | Q | a | q |
| 2 | | | " | 2 | B | R | b | r |
| 3 | | | # | 3 | C | S | c | s |
| 4 | | | \$ | 4 | D | T | d | t |
| 5 | | | % | 5 | E | U | e | u |
| 6 | | | & | 6 | F | V | f | v |
| 7 | | | ' | 7 | G | W | g | w |
| 8 | | | (| 8 | H | X | h | x |
| 9 | | |) | 9 | I | Y | i | y |
| A | | | * | : | J | Z | j | z |
| B | | | + | ; | K | [| k | { |
| C | | | , | < | L | \ | l | |
| D | | | - | = | M |] | m | } |
| E | | | . | > | N | ^ | n | ~ |
| F | | | / | ? | O | _ | o | |

ASCII

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|---|---|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | | | | | |
| 1 | | | ! | 0 | @ | P | ~ | p | | | | | | | | |
| 2 | | | " | 1 | A | Q | a | q | | | | | | | | |
| 3 | | | # | 2 | B | R | b | r | | | | | | | | |
| 4 | | | \$ | 3 | C | S | c | s | | | | | | | | |
| 5 | | | % | 4 | D | T | d | t | | | | | | | | |
| 6 | | | & | 5 | E | U | e | u | | | | | | | | |
| 7 | | | ' | 6 | F | V | f | v | | | | | | | | |
| 8 | | | (| 7 | G | W | g | w | | | | | | | | |
| 9 | | |) | 8 | H | X | h | x | | | | | | | | |
| A | | | * | 9 | I | Y | i | y | | | | | | | | |
| B | | | + | : | J | Z | j | z | | | | | | | | |
| C | | | , | ; | K | [| k | { | | | | | | | | |
| D | | | - | < | L | \ | l | | | | | | | | | |
| E | | | . | = | M |] | m | } | | | | | | | | |
| F | | | / | > | N | ^ | n | ~ | | | | | | | | |

ISO 8859-1
(Latin 1)

Western Europe

Ç (E7)



| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|---|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | | | | | |
| 1 | | | | 0 | @ | P | ` | p | | | | | | | | |
| 2 | | ! | 1 | A | Q | a | q | | | | | | | | | |
| 3 | | " | 2 | B | R | b | r | | | | | | | | | |
| 4 | | # | 3 | C | S | c | s | | | | | | | | | |
| 5 | | \$ | 4 | D | T | d | t | | | | | | | | | |
| 6 | | % | 5 | E | U | e | u | | | | | | | | | |
| 7 | | & | 6 | F | V | f | v | | | | | | | | | |
| 8 | | ' | 7 | G | W | g | w | | | | | | | | | |
| 9 | | (| 8 | H | X | h | x | | | | | | | | | |
| A | |) | 9 | I | Y | i | y | | | | | | | | | |
| B | | * | : | J | Z | j | z | | | | | | | | | |
| C | | + | ; | K | [| k | { | | | | | | | | | |
| D | | , | < | L | \ | l | | | | | | | | | | |
| E | | - | = | M |] | m | } | | | | | | | | | |
| F | | . | > | N | ^ | n | ~ | | | | | | | | | |
| | | / | ? | O | _ | o | | | | | | | | | | |

ISO 8859-7

Greek

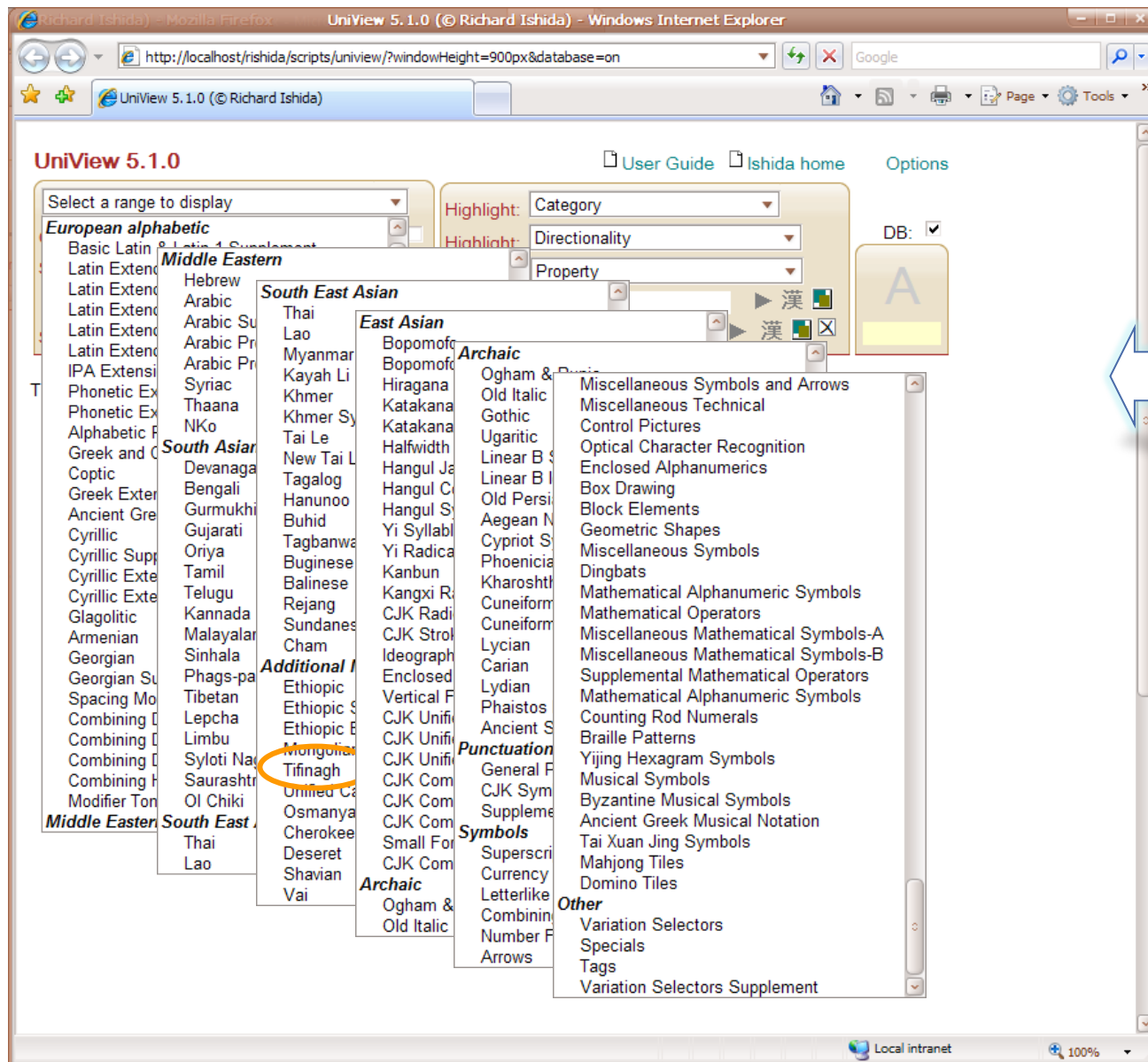
η (E7)



| Standard | Country | No. of chars |
|------------------------------------|-------------------|------------------|
| KS X 1001:1992 | Korea | 8,224 |
| GB 2312-80 | Mainland China | 7,445 |
| Big Five CNS 11643-1992 | Taiwan | 13,494 48,711 |
| JIS X 0208:1997 JIS X 0212-1990 | Japan | 6,879 6,067 |

Character encoding

Unicode



Unicode

All languages



Tifinagh Unicode block

| | 2D3 | 2D4 | 2D5 | 2D6 |
|---|-----|-----|-----|-----|
| 0 | ⵀ | ⵁ | ⵂ | ⵃ |
| 1 | ⵄ | ⵅ | ⵆ | ⵇ |
| 2 | ⵈ | ⵉ | ⵊ | ⵋ |
| 3 | ⵌ | ⵍ | ⵎ | ⵏ |
| 4 | ⵐ | ⵑ | ⵒ | ⵓ |
| 5 | ⵔ | ⵕ | ⵖ | ⵗ |
| 6 | ⵙ | ⵚ | ⵛ | |
| 7 | ⵝ | ⵞ | ⵟ | |
| 8 | ⵡ | ⵢ | ⵣ | |
| 9 | ⵥ | ⵦ | ⵧ | |
| A | ⵩ | ⵪ | ⵫ | |
| B | ⵭ | ⵮ | ⵯ | |
| C | ⵱ | ⵲ | ⵳ | |
| D | ⵵ | ⵶ | ⵷ | |
| E | ⵹ | ⵺ | ⵻ | |
| F | ⵽ | ⵾ | ⵿ | |

Coded character set

Code point

2D63 (hexadecimal)

11619 (decimal)



○ 𠬞 〇 𠬞 !
2D30 2D63 2D53 2D4D 21

UTF-16

2D 30 2D 63 2D 53 2D 4D 00 21

UTF-8

E2 B4 B0 E2 B5 A3 E2 B5 93 E2 B5 8D 21

UTF-32

00 00 2D 30 00 00 2D 63 00 00 2D 53 00 00 2D 4D 00 00 00 21

Character encodings



- Character set
- Coded character set
- Code point
- Character encoding
- **Charset**

Character encoding: What do I need to do?



Step 1: Choose an encoding

- ◆ Supports many languages in a single character set so that
 - ◆ it's easy to architect multilingual solutions
 - ◆ you can have a mix of languages on a single page
- ◆ Reduce complexity when storing multilingual data, eg. in databases, and when receiving form data
- ◆ Provide all symbols you'll need, eg. © ® ™ etc...
- ◆ Wide support in browsers, scripts, editors, databases, operating systems, etc.

The answer is:

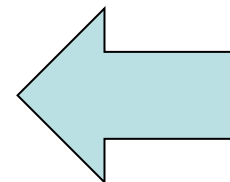
Unicode



Step 3: Declaring the encoding

1. In the HTTP header
2. In the document

HTTP/1.1 200 OK
Date: Wed, 05 Nov 2003 10:46:04 GMT
Server: Apache/1.3.28 (Unix) PHP/4.2.3
Content-Location: CSS2-REC.en.html
Vary: negotiate,accept-language,accept-charset
TCN: choice
P3P: policyref=http://www.w3.org/2001/05/P3P/p3p.xml
Cache-Control: max-age=21600
Expires: Wed, 05 Nov 2003 16:46:04 GMT
Last-Modified: Tue, 12 May 1998 22:18:49 GMT
ETag: "3558cac9;36f99e2b"
Accept-Ranges: bytes
Content-Length: 10734
Connection: close
Content-Type: text/html; charset=utf-8
Content-Language: en



Set using

- ◆ Server defaults or overrides

Apache directives

- `AddCharset UTF-8 .php`
- `AddType 'text/html; charset=UTF-8' html`
- `<Files ~ "events\.html">`
`ForceType 'text/html; charset=UTF-8'`
`</Files>`

Set using

- ◆ Server defaults or overrides
- ◆ Scripting directives

PHP

- `header('Content-type: text/html; charset=utf-8');`

JSP

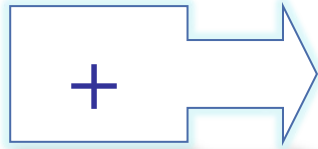
- `<%@ page contentType="text/html; charset=UTF-8" %>`

ASP

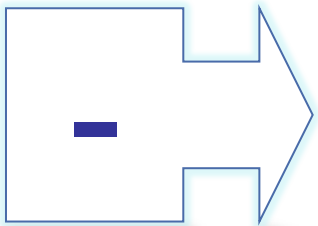
- `<%Response.charset="utf-8"%>`

Perl

- `print "Content-Type: text/html; charset=utf-8\n\n";`



- ◆ user agents can easily find the information
- ◆ highest priority in case of conflict – good for transcoding



- ◆ possibly difficult for content authors to change the setting - especially with an ISP
- ◆ server settings may get out of synch with the document
- ◆ doesn't cater for documents saved to or read from CD or hard disk
- ◆ may not facilitate processing or translation



Always declare the encoding
inside the document, too !



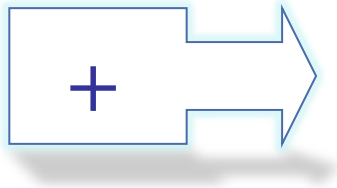
In-document declarations: HTML

```
<meta http-equiv="Content-type"  
      content="text/html; charset=UTF-8">
```

- ◆ In the head element, as near as possible to the top of the file
- ◆ Use preferred names from the IANA registry
- ◆ Avoid unregistered names (ie. x-...)



In-document declarations: HTML



- ◆ Document can be edited or read from CD or hard disk, etc.
- ◆ Dynamic documents can be saved to disk
- ◆ Helps developers, testers, or translation production managers perform a visual check
- ◆ The only in-document alternative



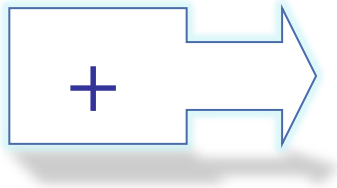
In-document declarations: XML

`<?xml version="1.0" encoding="UTF-8"?>`

- ◆ Required if not UTF-8 or UTF-16 !
- ◆ First thing in the file
- ◆ Useful even with UTF-8 or UTF-16
- ◆ Use preferred names from the IANA registry
- ◆ Avoid unregistered names (ie. x-...)



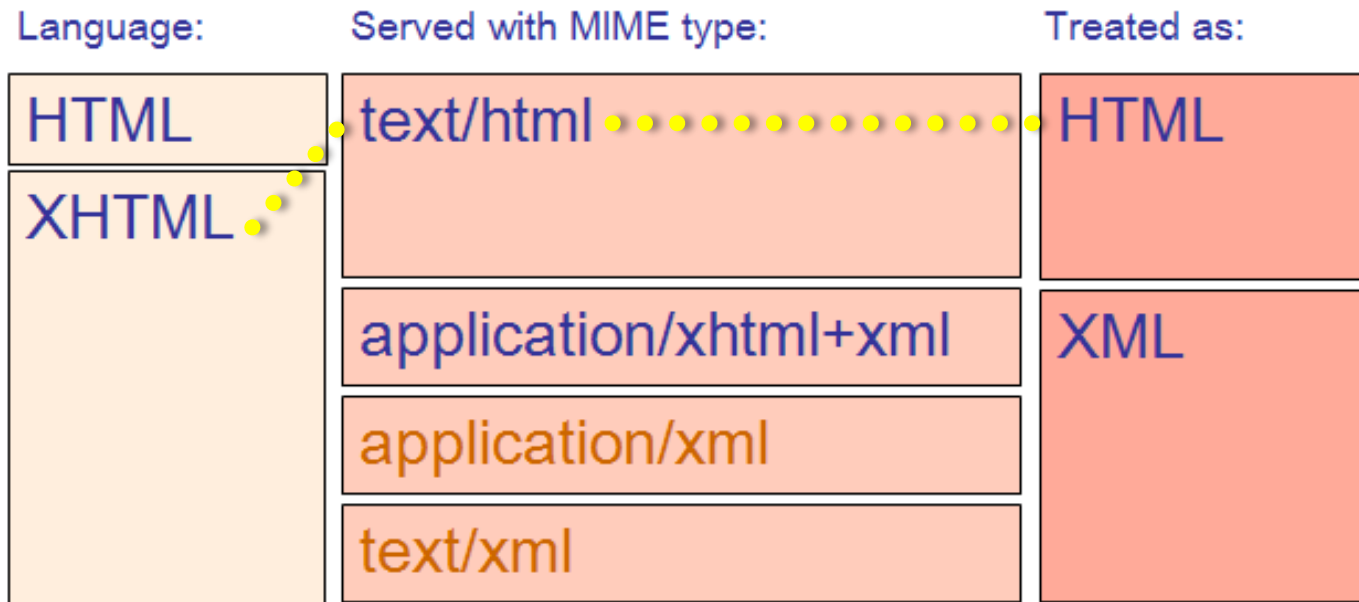
In-document declarations: XML



- ◆ Useful when processing as XML, eg. using XSLT
- ◆ Document can be edited or read from CD or hard disk, etc.
- ◆ Dynamic documents can be saved to disk
- ◆ Helps developers, testers, or translation production managers perform a visual check
- ◆ The only in-document alternative



XHTML served as text/html





XHTML served as text/html

<?xml version="1.0" encoding="UTF-8"?>

and?

or?

<meta http-equiv="Content-type"
content="text/html; charset=UTF-8">

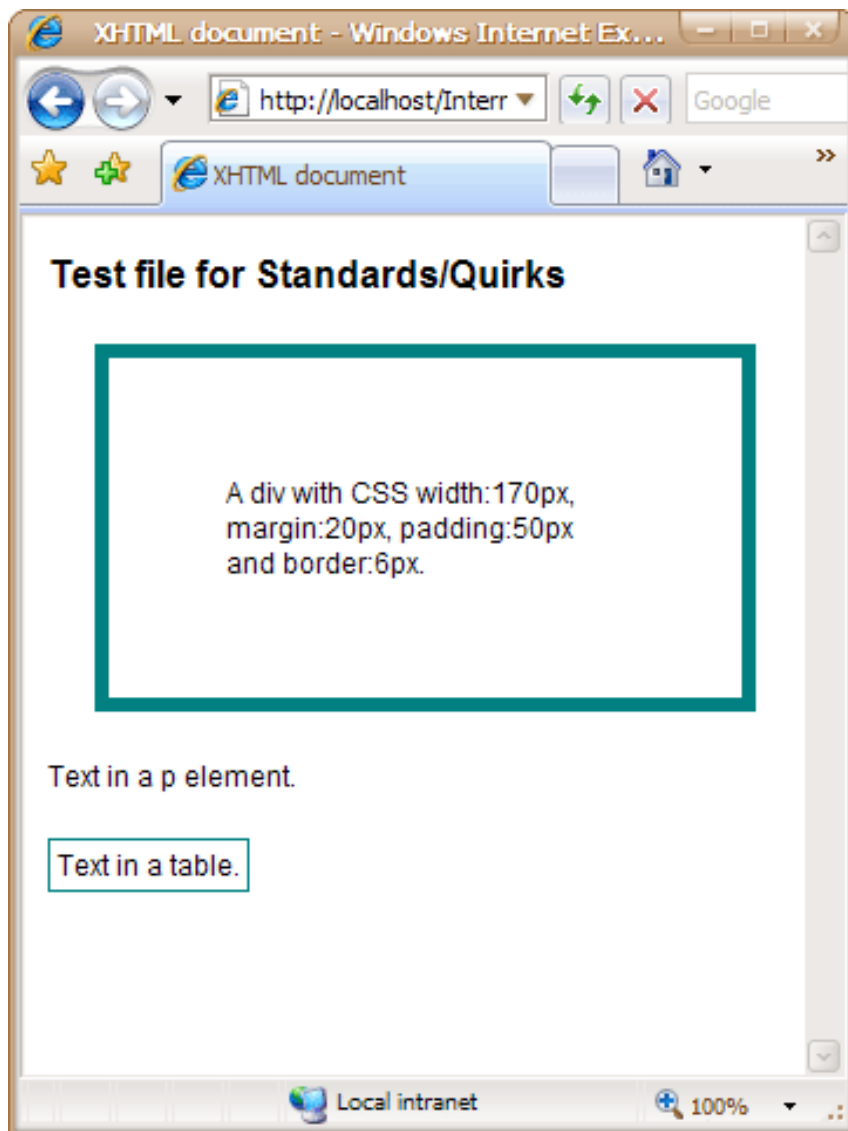


```
<?xml version="1.0" encoding="UTF-8"?>
```

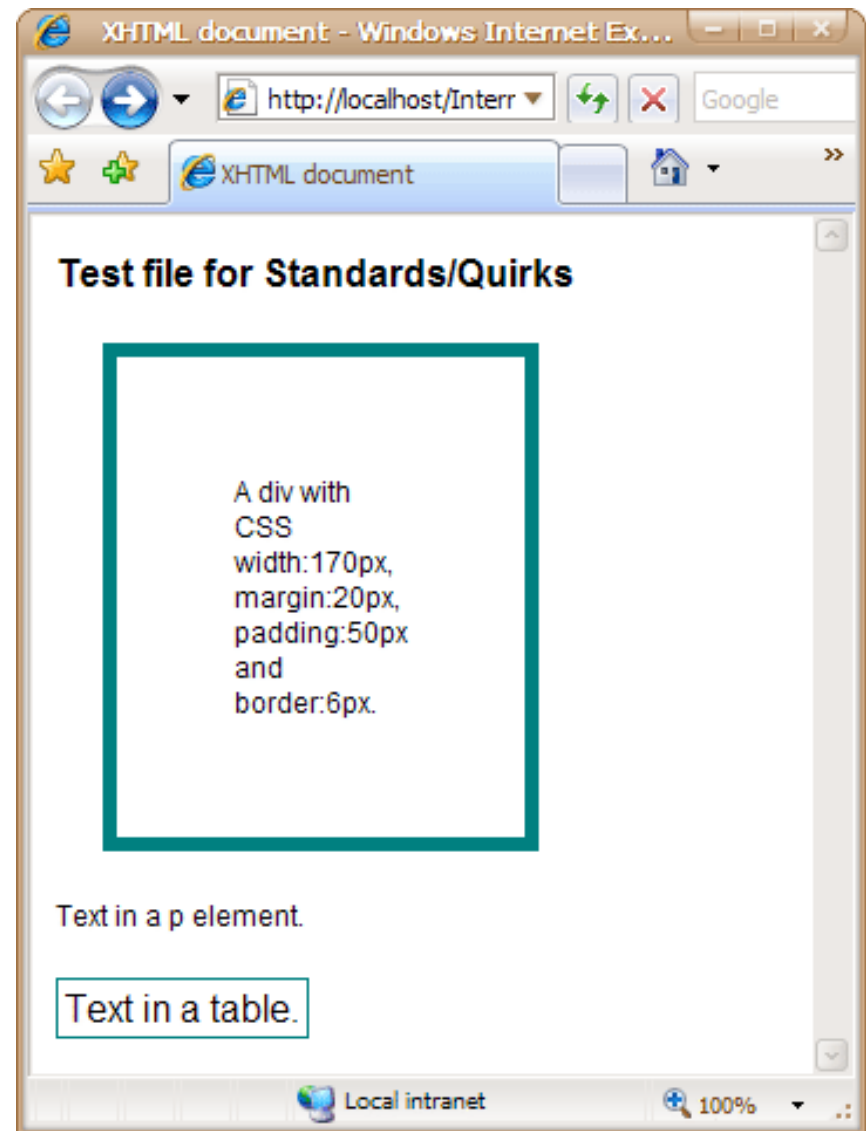
Use both unless ...
you need your page to
conform to Standards
mode on IE6.

```
<meta http-equiv="Content-type"  
content="text/html; charset=UTF-8">
```

XHTML served as text/html



Standards



Quirks



XHTML served as text/html

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xml:lang="en" lang="en">
<head>
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8"/>
  <title>XHTML document</title>
  <style type="text/css">
    body { background: white; color: black; font-family: arial, sans-serif; font-size: 12px; }
    p { font-size: 100%; }
    h1 { font-size: 16px; }
    div { margin: 20px; width: 170px; padding: 50px; border: 6px solid teal; }
    table { border: 1px solid teal; }
  </style>
</head>

<body>
  <h1>Test file for Standards/Quirks</h1>
  <div>
    A div with CSS width:170px, margin:20px, padding:50px and border:6px.
  </div>
  <p>Text in a p element.</p>
  <table>
    <tr><td>Text in a table.</td></tr>
  </table>
</body>
</html>
```



XHTML served as text/html

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xml:lang="en" lang="en">
<head>
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8"/>
  <title>XHTML document</title>
  <style type="text/css">
    body { background: white; color: black; font-family: arial, sans-serif; font-size: 12px; }
    p { font-size: 100%; }
    h1 { font-size: 16px; }
    div { margin: 20px; width: 170px; padding: 50px; border: 6px solid teal; }
    table { border: 1px solid teal; }
  </style>
</head>

<body>
  <h1>Test file for Standards/Quirks</h1>
  <div>
    A div with CSS width:170px, margin:20px, padding:50px and border:6px.
  </div>
  <p>Text in a p element.</p>
  <table>
    <tr><td>Text in a table.</td></tr>
  </table>
</body>
</html>
```



XHTML served as text/html

```
<?xml version="1.0" encoding="utf-8"?>
<!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>
.....
```

- ◆ In IE6, prevents application of standards mode
- ◆ Choices:
 - ◆ If no affected features, no worries
 - ◆ If IE6 irrelevant, no worries
 - ◆ Use workarounds in CSS
 - ◆ Remove the XML declaration
- ◆ If you omit, use UTF-8 or UTF-16

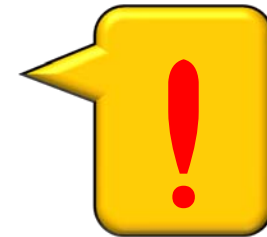




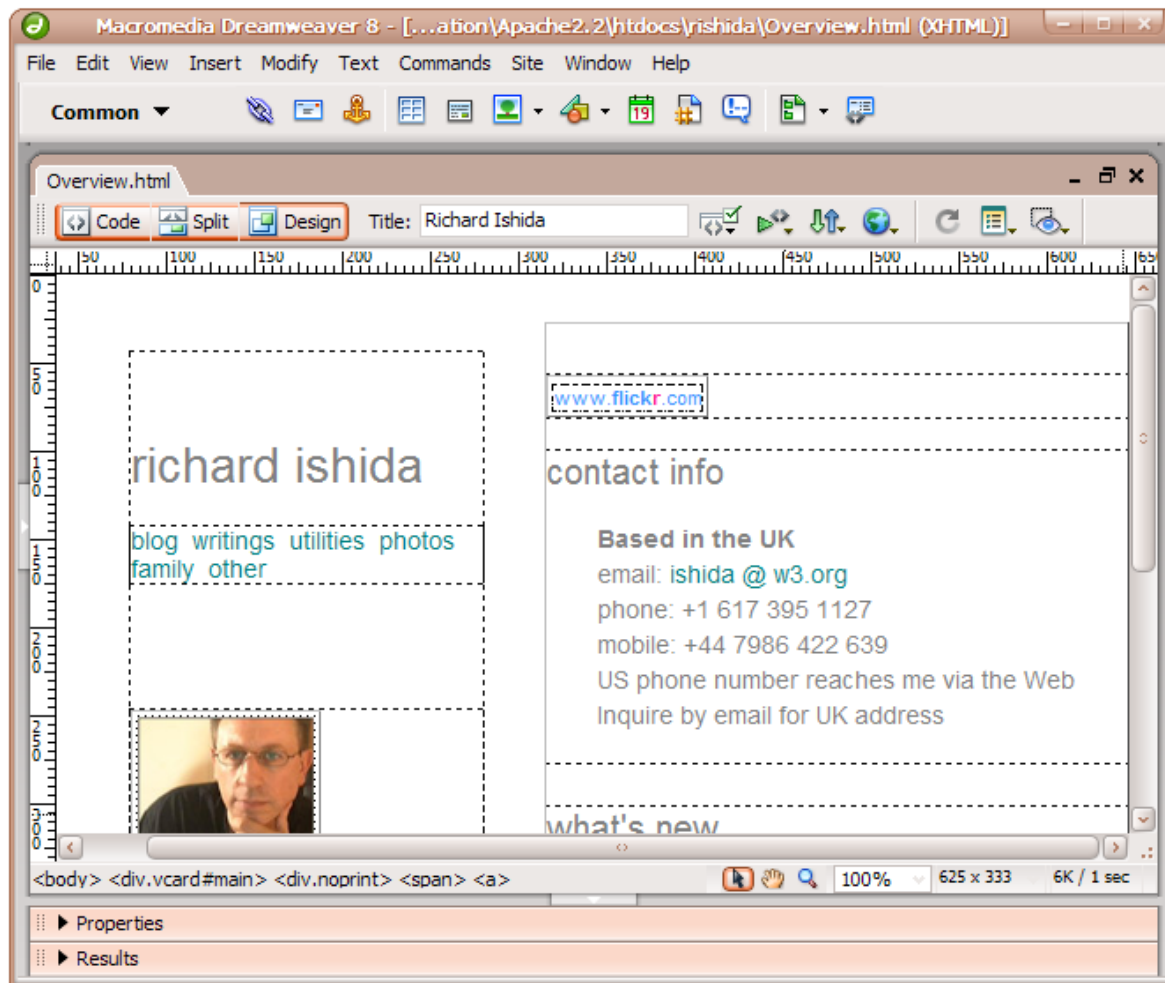
Step 2: Save your data in the right encoding

It's not enough to label
your data with an
encoding:

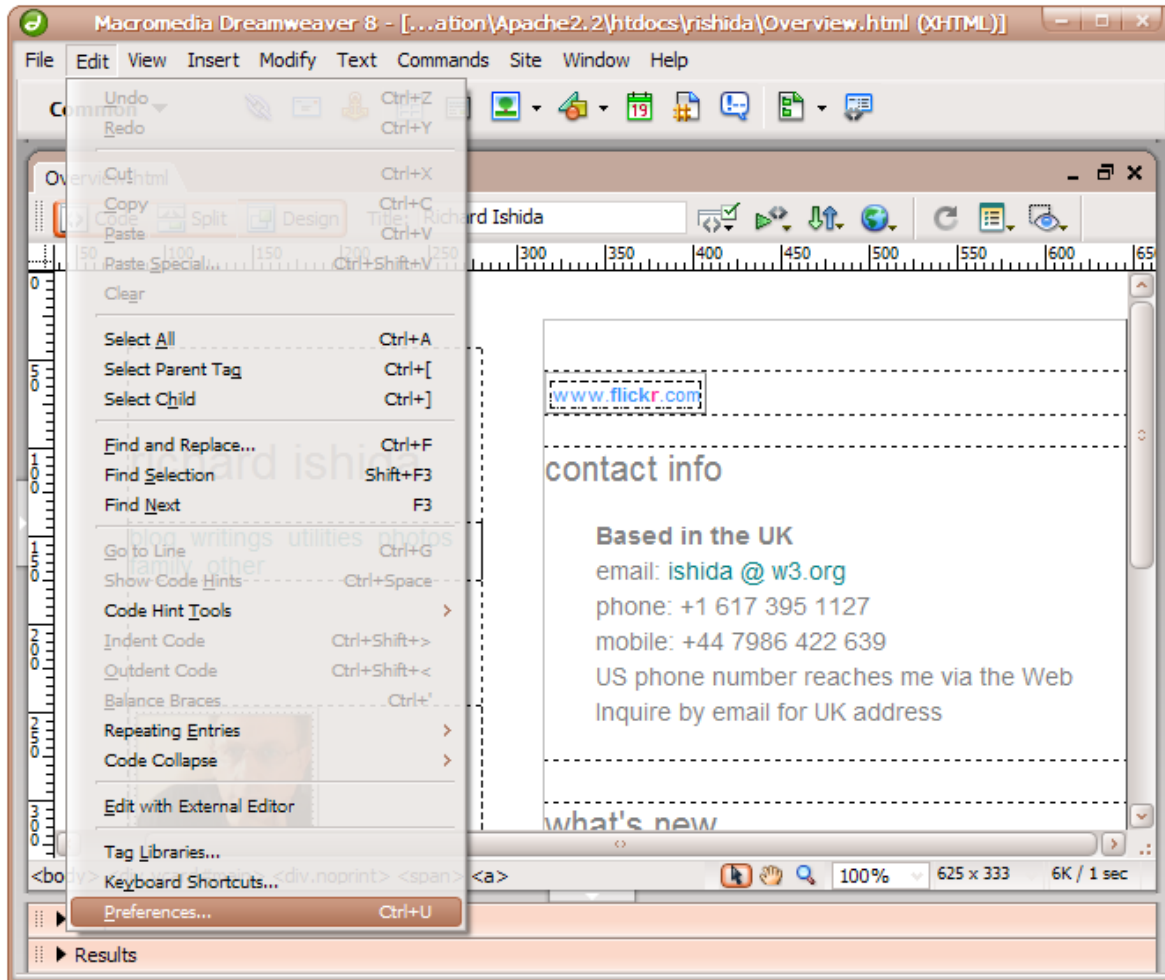
you need the content to
be in the right sequence
of bytes !



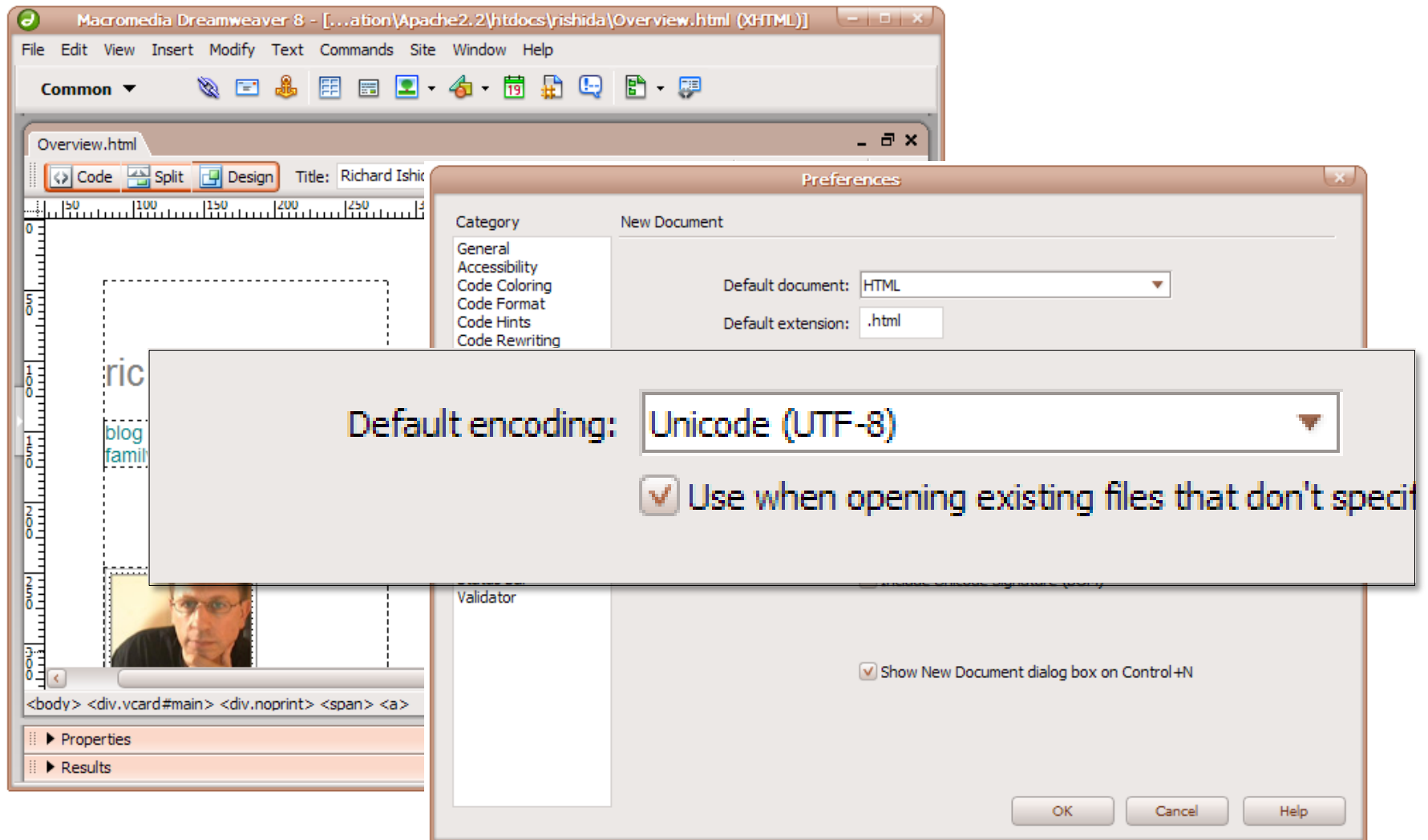
Step 2: Save your data in the right encoding



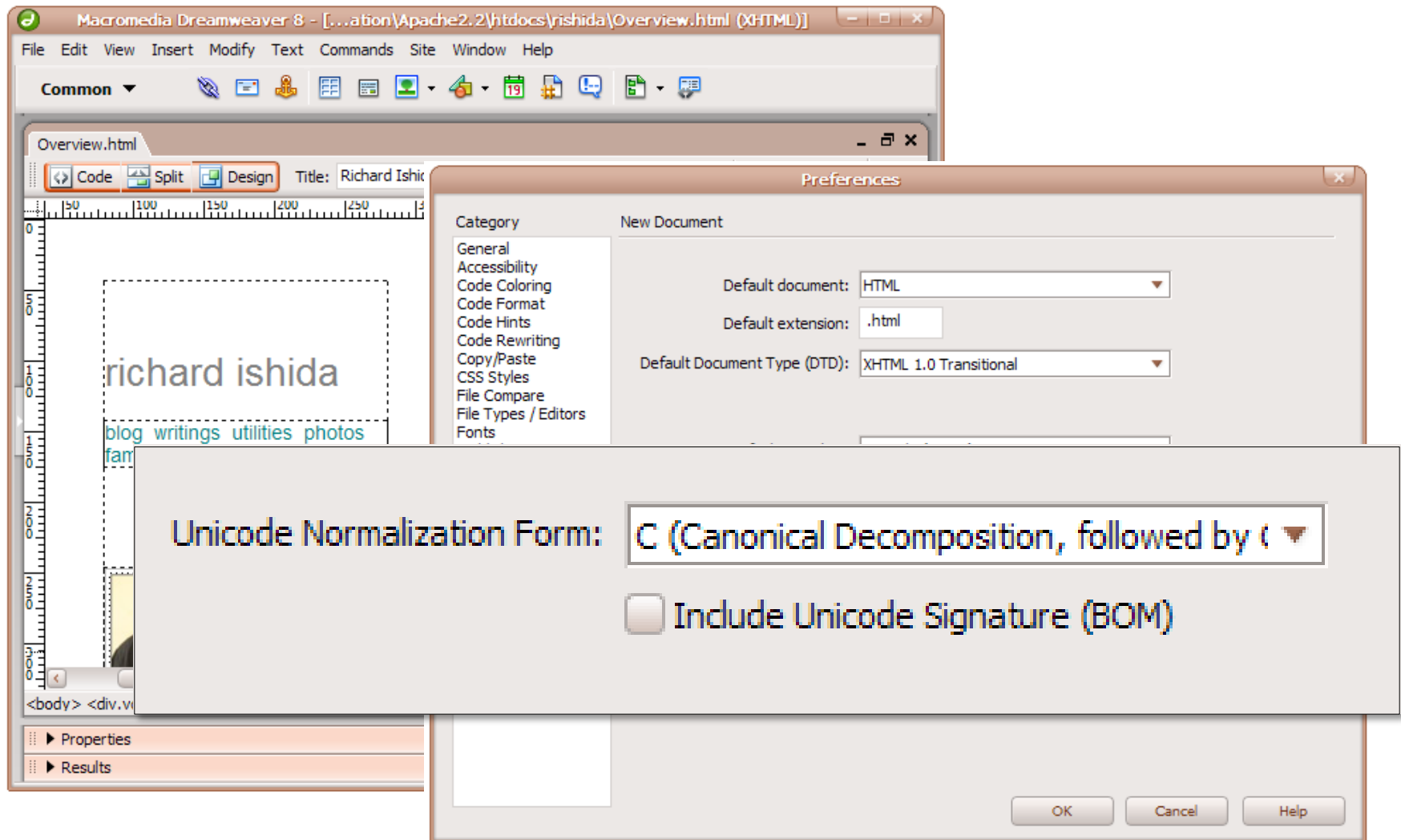
Step 2: Save your data in the right encoding



Step 2: Save your data in the right encoding

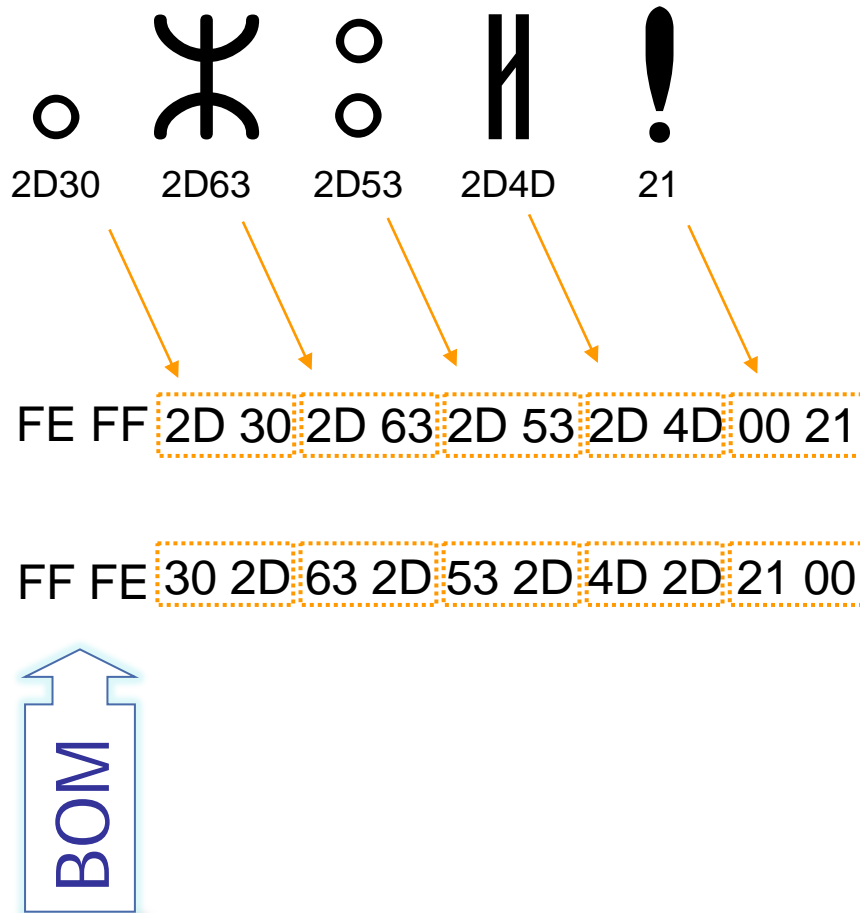


Step 2: Save your data in the right encoding



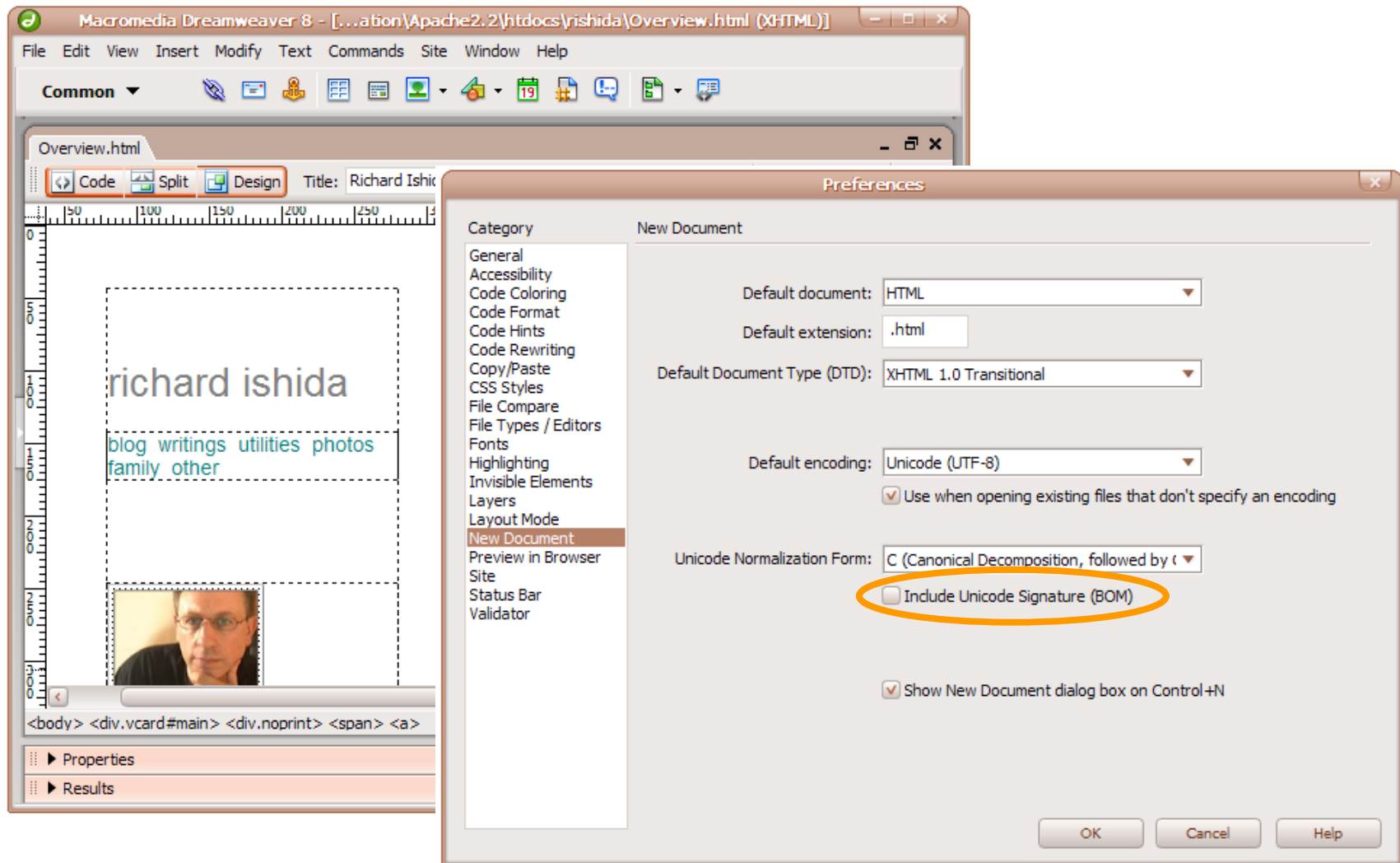


Step 2: Save your data in the right encoding

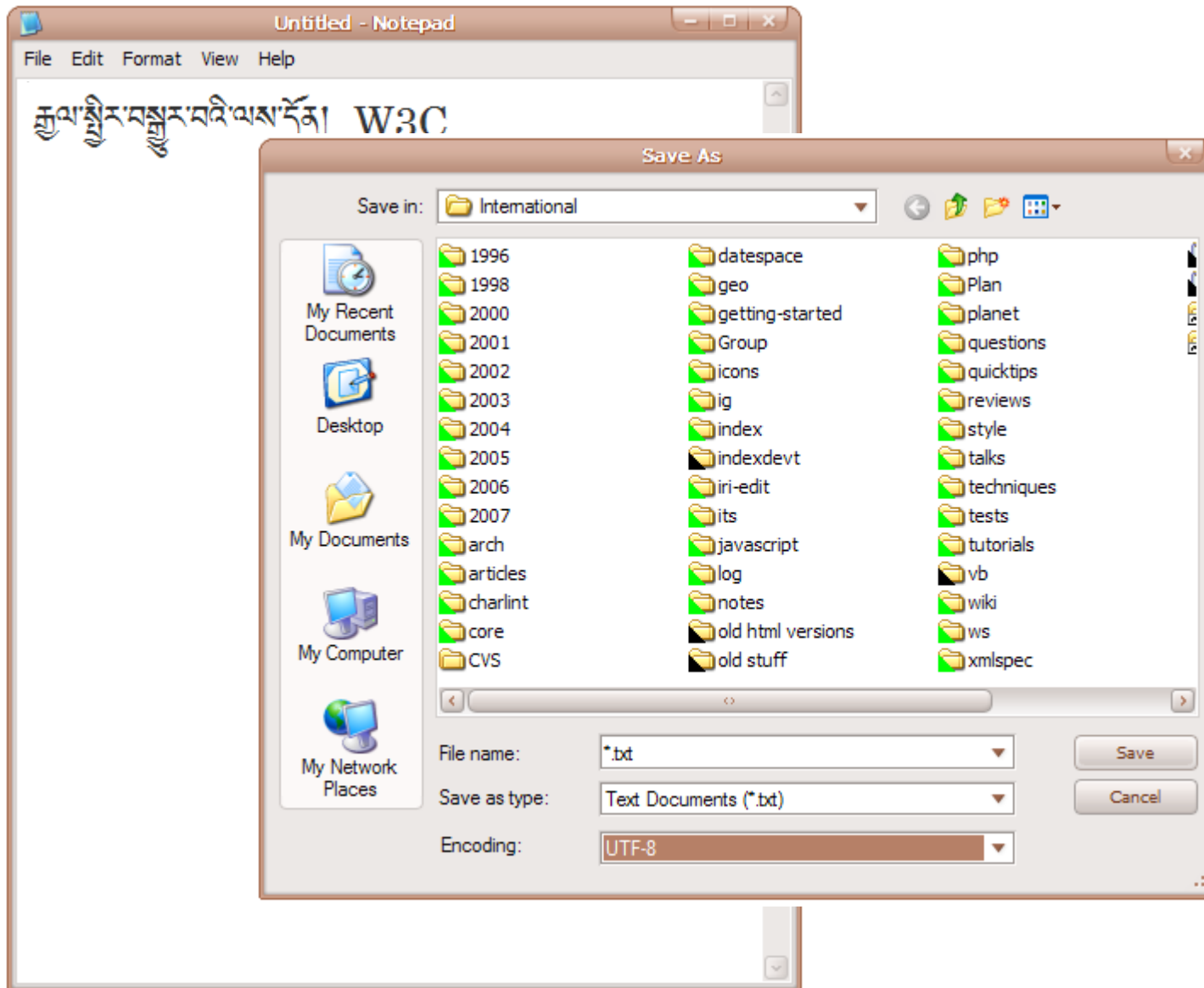


ï»¿ in UTF8

Step 2: Save your data in the right encoding



Step 2: Save your data in the right encoding



flickr

Signed in as r12a



Help

Sign Out

Home

You

Organize

Contacts

Groups

Explore

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Chateau de La Napoule

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by [r12a](#)

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- bugs [x]
- Côte d'azur [x]

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Comments

[r12a](#) pro says:

Just so you know, I have raised a [bug](#) about the incorrect character in the title. I left this one as is for the bug to have a reference.

Posted 36 months ago, ([permalink](#) | [delete](#) | [edit](#))



Some lessons from this section

- Choose an encoding – consider UTF-8 or UTF-16 (Unicode)
- Figure out how to save your data in your chosen encoding.
- Add character encoding declarations to your content.
- Use the meta tag for HTML and the XML declaration for XML.
- Use both for XHTML served as text/html, unless you want to avoid quirks mode on IE6 (in which case I suggest to omit the declaration and use UTF-8)
- Try to avoid getting a Byte-Order Mark (BOM) at the beginning of your UTF-8 content.
- Ensure that your back-end scripts, databases, etc can handle the characters you need in a seamless fashion.

<http://www.w3.org/International/tutorials/tutorial-char-enc>



Character encoding: Using escapes



What is an escape?

á

- ◆ `á` hex NCR
- ◆ `á` decimal NCR
- ◆ `á` character entity
- ◆ `\E1` CSS escape

NCR = Numeric Character Reference



Save your data in the encoding

Jako efektivnější se nám jeví pořádání tzv. Road Show prostřednictvím našich autorizovaných dealerů v Čechách a na Moravě, které proběhnou v průběhu září a října.



Save your data in the encoding

Jako efektivnĕjší se
nám jeví
pořádání tzv.
Road Show prostřednictvím
našich autorizovanǽch
dealerů v Čechách a
na Moravě; které
proběhnou v
průbůhu zá
ří a října.



When should I use escapes?

- ◆ Syntax-related characters
`<` (`<`) `>` (`>`) `&` (`&`) `"` (`"`)
- ◆ Characters not supported by the document encoding
It may be better to change the encoding!
- ◆ Characters not supported by the input tools
Not a long term solution!
- ◆ Characters that are invisible or ambiguous
eg. `‏` / ` `
eg. ` ` / ` `



- ◆ € is `€` not `€`;
Use Unicode code points, no matter what encoding you used !
- ◆ `U+00E1`
Use Hex values rather than Decimal
- ◆ `á`;
Character entities may cause problems for XML processing
- ◆ `𒍅` not `��`;
Use a single value for supplementary characters, not two



Some lessons from this section

- Save data in an encoding that means you won't need to use escapes (eg. Unicode).
- Use escapes for characters that are invisible or ambiguous.
- Use Unicode code points for escapes, regardless of the character encoding you are using for your content.
- Be careful about using character entities (like ´) if you are going to process the content later as XML.

<http://www.w3.org/International/questions/qa-escapes>



Language tagging: Two types of declaration

- ◆ Accessibility
- ◆ Authoring tools
- ◆ Translation tools
- ◆ Font selection
- ◆ Page rendering
- ◆ Search
- ◆ Scripting

| | |
|---|-------|
| 雪 | zh-CN |
| 雪 | zh-TW |
| 雪 | zh-HK |
| 雪 | ja |
| 雪 | ko |

- ◆ Accessibility
- ◆ Authoring tools
- ◆ Translation tools
- ◆ Font selection
- ◆ Page rendering
- ◆ Search
- ◆ Scripting

Use now to
increase
potential
applications !



Two things to be labelled

◆ Text-processing language

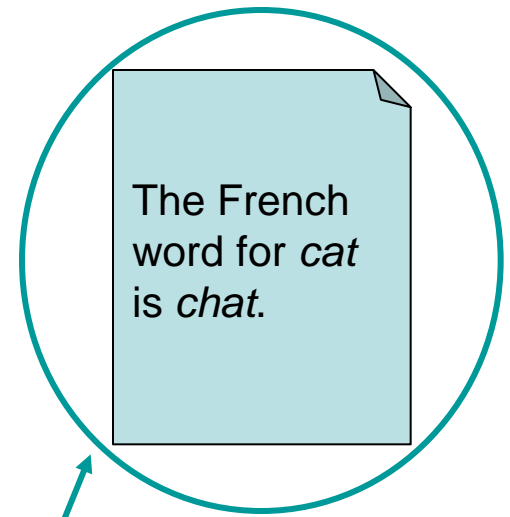
- ◆ the language of a specific range of text
- ◆ used for processing such as text-to-speech, styling, etc.
- ◆ can indicate only ONE language at a time



This is French text.

◆ Metadata about the intended audience

- ◆ describes the language(s) of the document as a whole
- ◆ not a list of all languages used in the document
- ◆ could be more than one language



This is an English document.



Japanese phrase book

hello

今日は

thank you

ありがとう

goodbye

さようなら

venue
te page
tient une
ntité
rme de
ses
es.
us
érons
ceci
s plaira.

MyOrganization

Go here

Bonjour cher
lecteur.

Go there

Go
elsewhere

Voici des choses
que vous pouvez
lire. Nous les
avons traduits pour
que vous les
compreniez;
malgré le fait que
la navigation reste
en anglais.

Go back

French



Japanese

hello

thank you

goodbye

English

Greetings

This Web page
contains an
enormous
amount of
useful stuff.

We hope you
will enjoy

Bienvenue

Cette page
contient une
quantité
énorme de
choses utiles.

Nous
espérons que
ceci vous
plaira.

French

Bonjour cher
lecteur.

Voici des choses
que vous pouvez
lire. Nous les
avons traduits pour
que vous les
compreniez;
malgré le fait que
la navigation reste
en anglais.

French



Japanese phrase book

| | |
|-----------|-------|
| hello | 今日は |
| thank you | ありがとう |
| goodbye | さようなら |

English

Gree
This
cont
enorm
amor
usefu
We h
will e

Eng

MyOrganization

Go here

Go there

Go
elsewhere

Go back

Bonjour cher lecteur.

Voici des choses
que vous pouvez
lire. Nous les avons
traduits pour que
vous les
compreniez; malgré
le fait que la
navigation reste en
anglais.

French



Ways of declaring language

HTTP Content-Language header

```
HTTP/1.1 200 OK
Date: Wed, 05 Nov 2003 10:46:04 GMT
Server: Apache/1.3.28 (Unix) PHP/4.2.3
...
Content-Type: text/html; charset=utf-8
Content-Language: en
```

Language attribute on html tag

Content-Language meta tag

Language attribute on embedded element

```
<html lang="en">
<head>
...
<meta http-equiv="Content-Language" content="en" />
...
</head>
<body>
<p>The French word for <em>cat</em> is
  <em lang="fr">chat</em>.</p>
...
</body>
</html>
```



```
HTTP/1.1 200 OK
Date: Wed, 05 Nov 2003 10:46:04 GMT
Server: Apache/1.3.28 (Unix) PHP/4.2.3
...
Content-Type: text/html; charset=utf-8
Content-Language: en, fr, sp
```

- ◆ Set on the server
- ◆ Can indicate more than one language
 - ◆ metadata ✓
 - text-processing ✗
- ◆ Lower precedence for text-processing than language attribute on html tag
- ◆ Use for text-processing in mainstream browsers is patchy



`<html lang="en">`

- ◆ Information is inherited, so html element sets the default for the whole document
- ◆ Overrides any conflicting HTTP declaration
- ◆ Can indicate only a single language
 - ◆ metadata ✗
 - ◆ text-processing ✓
- ◆ Most user agents recognize it for text-processing



- ◆ HTML:

```
<html lang="ja">
```

- ◆ XHTML as text/html:

```
<html lang="ja" xml:lang="ja"  
      xmlns="http://www.w3.org/1999/xhtml">
```

- ◆ XHTML as XML:

```
<html xml:lang="ja"  
      xmlns="http://www.w3.org/1999/xhtml">
```



```
<meta http-equiv="Content-Language" content="en,fr,sp" />
```

- ◆ Not mentioned in HTML specification
- ◆ Can indicate more than one language
 - ◆ metadata ✓
 - text-processing ✗
- ◆ Although informal guidance on the Web commonly points to this, and some authoring tools use it, user agents and applications don't actually recognize it



- ◆ element:

```
<p>The French for <em>Cat</em> is  
<em lang="fr" xml:lang="fr">chat</em>.</p>
```

- ◆ span:

```
<p>The title in Chinese is <span lang="zh-Hans"  
xml:lang="zh-Hans">中国科学院文献情报中心</span>.  
</p>
```



- Don't munge together declarations of text-processing language and metadata about the intended audience.
- Use HTTP for metadata about the intended audience.
- Use attributes for labeling text-processing language.
- Always include language information in the html tag.
- Avoid use of the meta element for language information you want to be used for text processing.

<http://www.w3.org/International/TR/i18n-html-tech-lang>

Language: The new language tag values



Before: RFC 3066

language – region

en

IANA registered tag

en-GB

- ◆ ISO 639 language codes
- ◆ ISO 3166 country codes

en-scouse



Now: BCP 47 (includes RFC 4646)

language – script – region – variant – extension – private_use

- ◆ only language subtag required
- ◆ codes available only from new IANA registry (based on ISO and UN codes)



%%

Type: language

Subtag: cs

Description: Czech

Added: 2005-10-16

Suppress-Script: Latn

%%

Type: language

Subtag: cu

Description: Church Slavic

Description: Old Slavonic

Description: Church Slavonic

Description: Old Bulgarian

Description: Old Church Slavonic

Added: 2005-10-16

%%

Type: language

Subtag: cv

Description: Chuvash

Added: 2005-10-16

%%

<http://www.iana.org/assignments/language-subtag-registry>

ishida >> utilities

home blog writings utilities photos family other

IANA Language Subtag Registry Search

Select what you want to see. Click on a coloured bar for more information. Since the registry is in English, search in English.

Search descriptions:

Search for subtag(s):

Display a list:

language codes

| | |
|-----------|-------------------|
| nb | Norwegian Bokmål |
| nn | Norwegian Nynorsk |
| no | Norwegian |

geographic regions

| | |
|-----------|--------|
| NO | Norway |
|-----------|--------|

grandfathered

| | |
|---------------|---------------------------------|
| no-bok | Norwegian Bokmal [Do not use!] |
| no-nyn | Norwegian Nynorsk [Do not use!] |



related links

[About language subtags](#)

[PHP source code](#)

[IANA subtag registry](#)

notes

Descriptions You can search on any part of a description (eg. 'eng' gives 8 results, including Bengali, English and Tengwar).

Subtags Only exact matches of subtags are returned, ie. 'ak' doesn't match 'akk'. If you enter a single subtag, the tool will search for any matches. If you enter a hyphen-separated list, the tool will look up potential matches for each subtag.

Validity and well-formedness This is not reported for hyphen-separated tags. If the results are in a different order than the hyphenated list, or there are duplicate subtags in one category, or there are subtags missing from the results (except for a private use sequence), then it is likely with the sequer

<http://rishida.net/utills/subtags/>



language – script – region – variant – extension – private_use

- ◆ always required
- ◆ codes available only from new IANA registry
- ◆ two-letter codes provided if available, 3-letter if not
- ◆ coming soon: ISO 639-6 codes



language – **script** – region – variant – extension – private_use

- ◆ ISO 15924 code
- ◆ only one, directly after language
- ◆ 4 letters long
- ◆ use only if needed
- ◆ 'Suppress-Script' labels in registry,
- ◆ eg. ~~en-Latn~~

zh-Hans

az-Cyrl



language – **script** – region – variant – extension – private_use

"... avoid script tags except where they add useful distinguishing information."

"for virtually any content that does not use a script tag today, it remains the best practice not to use one in the future."

zh-Hans

az-Cyrl

Addison Phillips



language – script – **region** – variant – extension – private_use

- ◆ ISO 3166-1 code or UN M.49 region code
- ◆ 2 letter alpha or 3 digit codes
- ◆ only one, following language and any script codes
- ◆ script code not required

en-GB

es-419

zh-Hant-HK



Some lessons from this section

- Use language attribute values from the IANA Language Subtag Registry.
- Follow the rules in BCP 47 – not RFC 3066.
- Keep the tags short – only use script subtags where really needed.

<http://www.w3.org/International/articles/language-tags/>



Text size

DochuLa Pass

Around 3,100 m high, in Bhutan.

© This photo is public. [Change?](#)

Uploaded on Jan 28, 2007 | [Map](#) | [Delete](#)

953 views / 3 comments

| Language | Translation | Ratio |
|------------|-----------------|-------|
| Korean | 조회 | 0.8 |
| English | views | 1 |
| Chinese | 次檢視 | 1.2 |
| Portuguese | visualizações | 2.6 |
| French | consultations | 2.6 |
| German | -mal angesehen | 2.8 |
| Italian | visualizzazioni | 3 |

Input processing features

Eingabeverarbeitungsfunktionen



Text size

Text size in graphics

Seals and sealions at Pier 39

ADD NOTE SEND TO GROUP ADD TO SET BLOG THIS ALL SIZES ORDER PRINTS ROTATE DELETE X



Seals and sealions at Pier 39

ADICIONAR OBSERVAÇÃO ENVIAR PARA UM GRUPO ADICIONAR AO ÁLBUM BLOGAR TODOS TAMAÑHOS IMPRIMIR GIRAR EXCLU





Text size

Text size in graphics

Seals and sealions at Pier 39

ADD NOTE SEND TO GROUP ADD TO SET BLOG THIS ALL SIZES ORDER PRINTS ROTATE DELETE X



Seals and sealions at Pier 39

Encargar impresión

ADD NOTE SEND TO GROUP ADD TO SET BLOG THIS ALL SIZES ORDER PRINTS ROTATE DELETE X





Text size

Form field label positioning

Global settings

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



Form field label positioning

Global settings

Interface language

Search language

Number of results

Acuan Umum

Bahasa Pengantar di Antar Muka

Bahasa Pengantar untuk Penelusuran

Jumlah Hasil Penelusuran

Allgemeine Voreinstellungen

Sprache der Benutzeroberfläche

Suchsprache

Anzahl der Ergebnisse



Form field label positioning

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



Text size

Graphics in fixed width boxes

Idioma de la interfaz

- ☐ arabe
- ☐ inglés
- ☐ finlandés
- ☐ francés
- ☐ italiano
- ☐ japonés
- ☐ ruso
- ☐ español
- ☐ sueco



Text size

Graphics in fixed width boxes

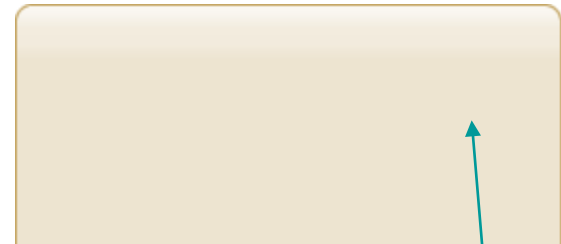
Bahasa Pengantar untuk Penelusuran

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



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;  
}
```





Graphics in fixed width boxes

**Bahasa Pengantar
untuk Penelusuran**

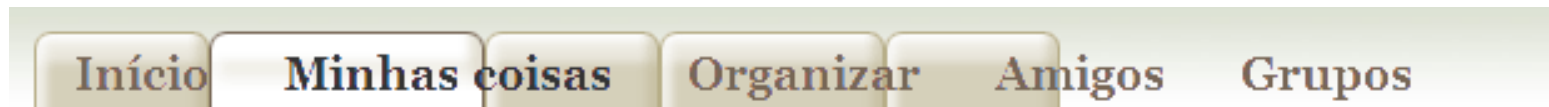
- ☐ Arab
- ☐ Inggris
- ☐ Finlandia
- ☐ Perancis
- ☐ Italia
- ☐ Jepang
- ☐ Rusia
- ☐ Spanyol
- ☐ Swedia

```
.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;  
}
```



Text size

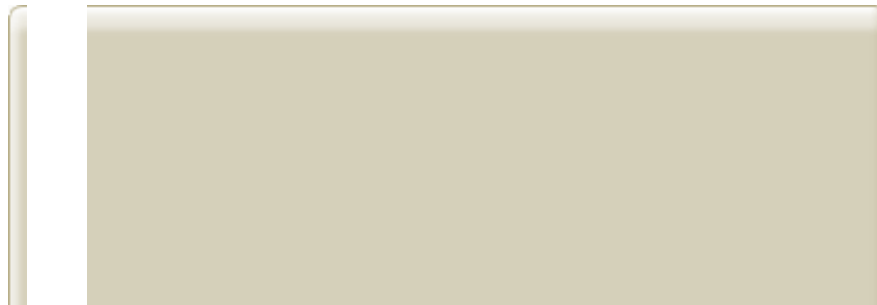
Tabs





Text size

Tabs

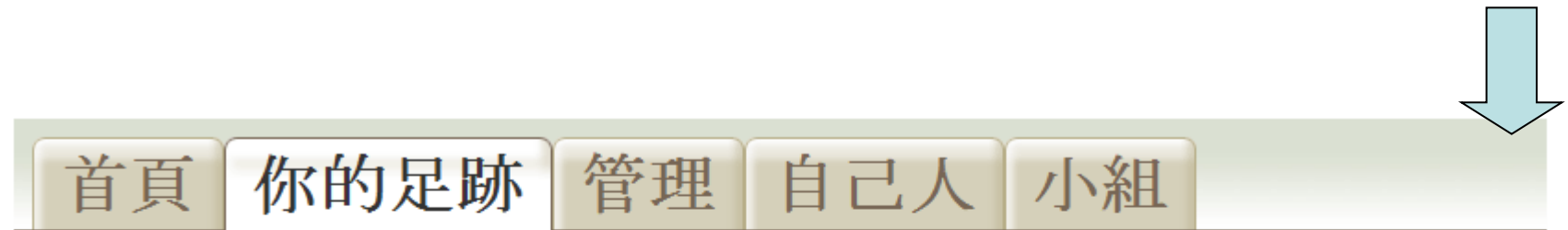
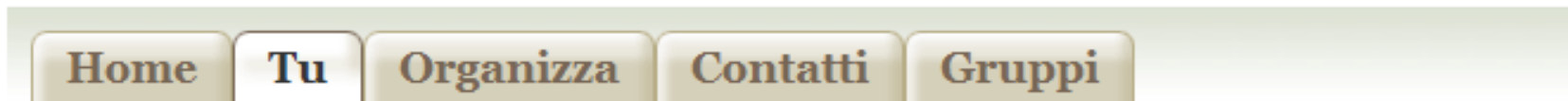


[Sliding Doors of CSS](http://alistapart.com/articles/slidingdoors/), Doug Bowman
<http://alistapart.com/articles/slidingdoors/>



Text size

Tabs





The value of internationalization

Internationalization significantly affects the ease of the product's localization. Retrofitting a linguistically- and culturally-centered deliverable for a global market is obviously much more difficult and time-consuming than designing a deliverable with the intent of presenting it globally. (Think back to the Y2K effort and trying to "undo" two-character year fields that were built on the assumption of "19xx").

So ideally, internationalization occurs as a fundamental step in the design and development process, rather than as an afterthought that can often involve awkward and expensive re-engineering.

further reading

- [W3C I18N resources relating to internationalization](#)

Author: Richard Ishida, W3C, Susan K. Miller, Boeing.

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For the history of document changes, search for [qa-i18n](#) in the i18n blog.

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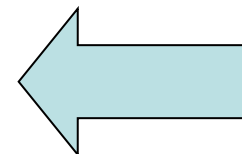
Tell us what you think (English).

 [Send us a comment](#)

Subscribe to an RSS feed.

 [New resources](#)

 [Home page news.](#)





Tell us what you think (English).

 **Send us a comment**

Subscribe to an RSS feed.

 **New resources**

 **Home page news.**

Powiedz nam co myślisz (po angielsku)

 **Wyślij komentarz**

Prenumeruj kanał RSS

 **Nowe źródła**

 **Wiadomość ze strony głównej.**

قل لنا رأيك (بالانجليزية).

 **ابعث تعليق.**

الإنضمام إلى خدمة RSS.


 **موارد جديدة.**


 **الصفحة الرئيسية للأخبار.**

Выскажите своё мнение
(по-английски).

 **Напишите нам**

Подпишитесь на ленту новостей RSS.

 **Новые публикации**

 **Новости главной
страницы.**

告诉我们您的想法（用英语）。

 **将您的评论发送给我们**

订阅 RSS 提要

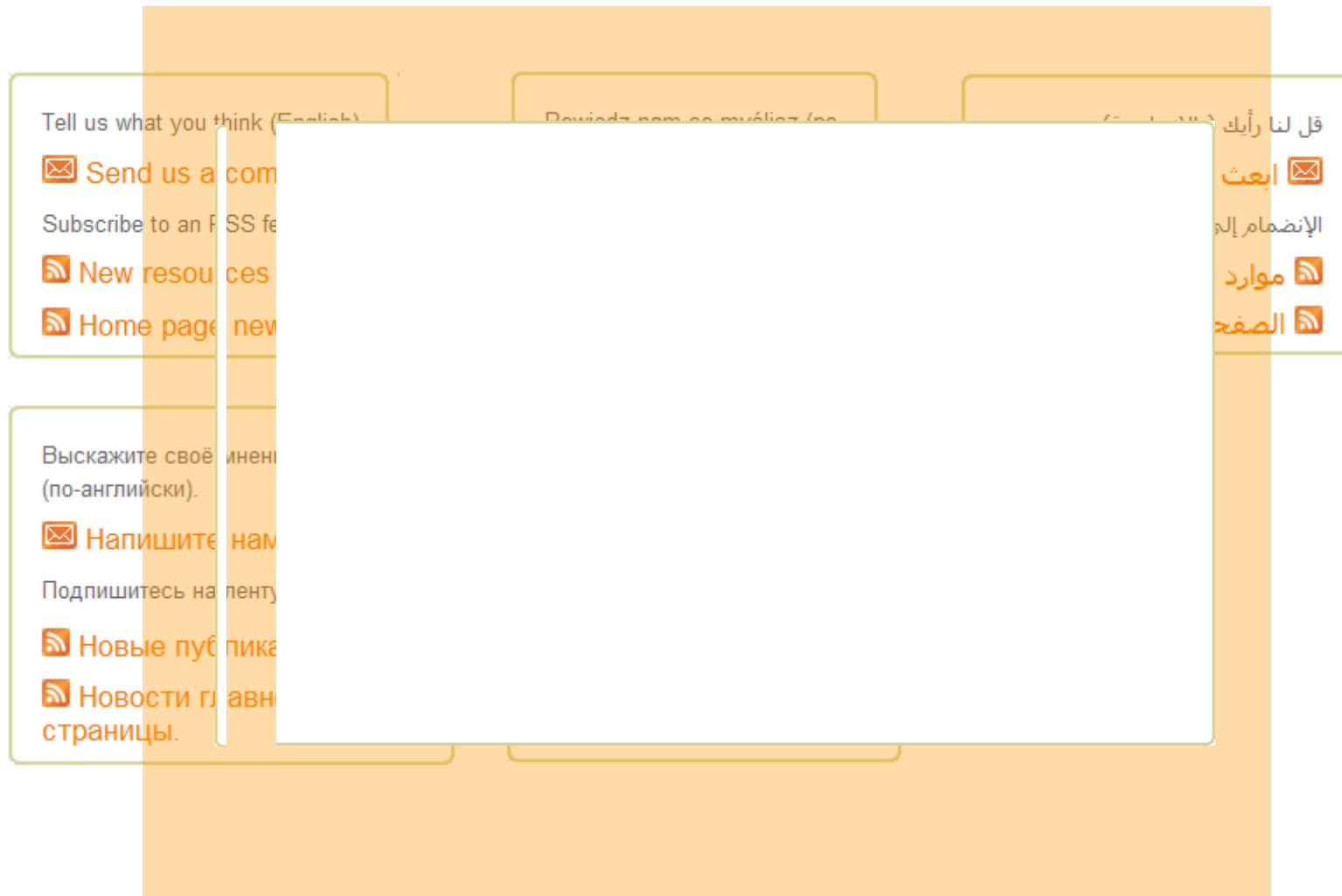
 **新的资源**

 **主页新闻.**



Text size

Round cornered boxes





Text size

Round cornered boxes

English:

Input processing features

German:

Eingabeverarbeitungsfunktionen

Eingabeverarbeitungsfunktionen



Round cornered boxes

English:

Input processing features

German:

Eingabeverarbeitungsfunktionen

German:

Eingabeverarbeitungs-
funktionen

Eingabe&00AD;verarbeitungs&00AD;funktionen



Some lessons from this section

- Think about how to cope with text that expands in translation
- Avoid placing labels to the side of form entry fields, icons, etc, if you can
- For text backgrounds use large images and ‘sliding door’ effects to allow coverage of text whatever the size
- Leave expansion space at the end of lines of tabs
- Consider how to deal with long compound nouns: don’t make the column too narrow; warn translators
- Look out for and lobby the W3C CSS Working Group to publish rounded borders and multiple backgrounds parts of CSS3
- Lobby Mozilla to support the soft-hyphen character

<http://www.w3.org/International/questions/qa-resizing-backgrounds>

Navigating to localized pages



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: EnglishIf 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.



تنظیمها

نگاردهای جست و جو | همه چیز درباره Google

تنظیم‌های دلخواه من ذخیره شوند

در پایان تنظیم‌های خود را ذخیره کنید و سپس به بخش جست و جو بازگردید.

تنظیم‌های فراگیر (این تنظیمها در همه بخشهای Google اعمال می‌شود)

زبان تمایش ٹھوگل

نمایش نگه ها و پیام های Google به: **پارسی**

زبان جستجو

جستجو در صفحاتی به هر زبان (سفارش شده).

● تنها در صفحاتی به این زبان (ها) بگرد:

- | | | | |
|-------------------------------------|---|-------------------------------------|--|
| <input type="checkbox"/> آلمانی | <input type="checkbox"/> بلغاری | <input type="checkbox"/> عربی | <input type="checkbox"/> یونانی |
| <input type="checkbox"/> استونیایی | <input type="checkbox"/> ترکی استانبولی | <input type="checkbox"/> فرانصوی | <input type="checkbox"/> یرتعالی |
| <input type="checkbox"/> اسلواکی | <input type="checkbox"/> دانمارکی | <input type="checkbox"/> فنلاندی | <input type="checkbox"/> چینی (ساده شده) |
| <input type="checkbox"/> اسلونیایی | <input type="checkbox"/> روسی | <input type="checkbox"/> لتونیایی | <input type="checkbox"/> چینی (سنتی) |
| <input type="checkbox"/> اسپانیایی | <input type="checkbox"/> رومانیایی | <input type="checkbox"/> لهستانی | <input type="checkbox"/> چک |
| <input type="checkbox"/> اندونزیایی | <input type="checkbox"/> زاپتی | <input type="checkbox"/> لیتوانیایی | <input type="checkbox"/> کاتالانیایی |
| <input type="checkbox"/> انگلیسی | <input type="checkbox"/> سوئدی | <input type="checkbox"/> مجارستانی | <input type="checkbox"/> کره‌ای |
| <input type="checkbox"/> ایتالیایی | <input type="checkbox"/> صربیی | <input type="checkbox"/> نورژی | <input type="checkbox"/> گرواتی |
| <input type="checkbox"/> ایسلندی | <input type="checkbox"/> عبری | <input type="checkbox"/> هندی | |

شمار یافته ها

حالت پیشفرض Google (ده یافته در هر صفحه) بر سرعت جست وجوی شما می افزاید
در هر صفحه 10 ▼ یافته فهرست شود.

یتجره یافتہ ہا

فهرست یافته ها در پنجره تازه ای نمایش داده شود.

تتظيماى دلبواى من ذخيرى شوندى

در پایان تنظیم‌های خود را ذخیره کنید و سپس به بخش جست و جو بازگردید.

(توجه: چنانچه گزینه کوکی در کائوسگر شما غیر فعال باشد، تنظیمها ثبت و ذخیره نخواهند شد.)

Navigating to localized pages

Language links

تنظیمها [Google](#) | [همه چیز درباره Google](#) | [شگردهای جست و جو](#)

دریایان تنظیمهای خود را ذخیره کنید و سپس به بخش جست و جو بازگردید.

تنظیمهای فراگیر (این تنظیمها در همه بخشهای Google اعمال می شود)

زبان نمایش گوگل نمایش نکته ها و پیام های Google به:

زبان جستجو جستجو در صفحاتی به هر زبان (سف) ☒ تنها در صفحاتی به این زبان(ها) بگر ☐

| | |
|-------------------------------------|--------------------------------------|
| <input type="checkbox"/> آلمانی | <input type="checkbox"/> بلغاری |
| <input type="checkbox"/> استونیایی | <input type="checkbox"/> ترکی استانب |
| <input type="checkbox"/> اسلواکی | <input type="checkbox"/> دانمارکی |
| <input type="checkbox"/> اسلونیایی | <input type="checkbox"/> روسی |
| <input type="checkbox"/> اسپانیایی | <input type="checkbox"/> رومانیایی |
| <input type="checkbox"/> اندونزیایی | <input type="checkbox"/> زاپنی |
| <input type="checkbox"/> انگلیسی | <input type="checkbox"/> سوئدی |
| <input type="checkbox"/> ایتالیایی | <input type="checkbox"/> صربی |
| <input type="checkbox"/> ایسلندی | <input type="checkbox"/> عبری |

شمار یافته ها حالت پیشفرض Google (ده یافته در هر صفحه) یافته فهرست شود.

پنجره یافته ها ☐ فهرست یافته ها در پنجره تازه ای نمایش داده شود.

تنظیمهای دلخواه من ذخیره شوند

دریایان تنظیمهای خود را ذخیره کنید و سپس به بخش جست و جو بازگردید.

(توجه: چنانچه گزینه کوکی در کاورشگر شما غیر فعال باشد، تنظیمها ثبت و ذخیره نخواهند شد.)



NORTEL

SOLUTIONS PRODUCTS SERVICES SUPPORT ABOUT NEWS & EVENTS HELP

> LARGE ENTERPRISES
> SMALL AND MEDIUM BUSINESS
> GOVERNMENTS
> SERVICE PROVIDERS
> CABLE OPERATORS
> WIRELESS OPERATORS

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it's as simple as

CHANGE LOCATION
CHINA (中国)
CIS
COLOMBIA
DENMARK (DANMARK)
EASTERN EUROPE
ECUADOR
FINLAND (SUOMI)
FRANCE
GERMANY (DEUTSCHLAND)
GREECE
HONG KONG
INDIA
INDONESIA
IRELAND (REPUBLIC OF)
ISRAEL (ישראל)
ITALY (ITALIA)
JAPAN (日本)
KOREA (한국)
LUXEMBOURG
MALAYSIA

Microsoft Office...

1 2 3 4 5

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> ALL PROMOTIONS

PARTICIPATE

Phil Edholm, Enterprise, blogs on thoughts on the business.
> JOIN THE CONVERSATION
> MORE NORTEL BLOGS

CASE STUDIES

The Economist Group reports: A cost-effective, high-performance, converged network provides the flexibility to add new advanced services while helping staff collaborate and meet critical deadlines.
> READ THE CASE STUDY

SITE MAP CONTACT US PRIVACY TERMS

Navigating to localized pages

Pull down lists

The screenshot shows the Nortel website with a pull-down menu open for 'CHANGE LOCATION'. The menu lists the following countries: CHINA (□□), CIS, COLOMBIA, DENMARK (DANMARK), EASTERN EUROPE, ECUADOR, FINLAND (SUOMI), FRANCE, GERMANY (DEUTSCHLAND), GREECE, HONG KONG, INDIA, INDONESIA, IRELAND (REPUBLIC OF), ISRAEL (□□□□), ITALY (ITALIA), JAPAN (□□), KOREA (□□), LUXEMBOURG, and MALAYSIA. The website header includes the Nortel logo, navigation tabs for SOLUTIONS, PRODUCTS, SERVICES, and SUPPORT, and a search bar with a 'LOG IN' button. The main content area features a large banner for 'UNIFIED COMMUNICATIONS' with the tagline 'it's as simple as'. Below the banner is a section for 'HYPER CONNECTIVITY' with the text 'We make managing it simple.' and a link to 'GO TO HYPERCONNECTIVITY.COM >'. To the right of the banner are three columns of content: 'EXCLUSIVE OFFER' with a link to 'UNIFIED COMMUNICATIONS: WHAT, WHY & HOW? >>', 'PARTICIPATE' with a photo of Phil Edholm and links to 'JOIN THE CONVERSATION' and 'MORE NORTEL BLOGS', and 'CASE STUDIES' with a link to 'READ THE CASE STUDY'. The footer includes a 'SITE MAP' link, a 'CONTACT US' link, a 'PRIVACY' link, and a 'TERMS' link.

NORTEL

SOLUTIONS PRODUCTS SERVICES SUPPORT

> LARGE ENTERPRISES
> SMALL AND MEDIUM BUSINESS
> GOVERNMENTS
> SERVICE PROVIDERS
> CABLE OPERATORS
> WIRELESS OPERATORS

UNIFIED COMMUNICATIONS
it's as simple as

CHANGE LOCATION

- CHINA (□□)
- CIS
- COLOMBIA
- DENMARK (DANMARK)
- EASTERN EUROPE
- ECUADOR
- FINLAND (SUOMI)
- FRANCE
- GERMANY (DEUTSCHLAND)
- GREECE
- HONG KONG
- INDIA
- INDONESIA
- IRELAND (REPUBLIC OF)
- ISRAEL (□□□□)
- ITALY (ITALIA)
- JAPAN (□□)
- KOREA (□□)
- LUXEMBOURG
- MALAYSIA

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> READ THE CASE STUDY

SITE MAP **CONTACT US** **PRIVACY** **TERMS**

Navigating to localized pages

Selection pages

Search ▾ | A-Z Index | Feedback | Help | Languages

► About the Church
► Gospel Library
► Family Temple
► Home
► Serving
► News

WELCOME

The Church of Jesus Christ of Latter-day Saints

Search | Feedback | Site Map | Help | Country Sites | 


Home ► Languages



Choose a Language

| | | | | |
|--------------------|------------------|---------------|-----------------|-------|
| ▪ Bahasa Indonesia | ▪ Hmoob | ▪ Polski | ▪ Vosa vakaviti | ▪ 廣東話 |
| ▪ Český | ▪ Hrvatski | ▪ Português | ▪ Ελληνικά | ▪ 日本語 |
| ▪ Dansk | ▪ Ilokano | ▪ Reo Tahiti | ▪ Български | ▪ 한국말 |
| ▪ Deutsch | ▪ Italiano | ▪ Română | ▪ Монгол | |
| ▪ Diné bizaad | ▪ Kiribati | ▪ Slovenčina | ▪ Русский | |
| ▪ Español | ▪ Kreyòl Ayisyen | ▪ Slovenščina | ▪ Українська | |
| ▪ Eesti keeles | ▪ Lea Fakatonga | ▪ Suomi | ▪ ภาษาไทย | |
| ▪ Français | ▪ Magyar | ▪ Svenska | ▪ ພາສາລາວ | |
| ▪ Gagana Samoa | ▪ Nederlands | ▪ Tagalog | ▪ ภาษาอีสาน | |
| ▪ Hiligaynon | ▪ Norsk | ▪ Tiếng Việt | ▪ 國語 | |

FIRST PRESIDENT



President Thomas S. Monson and Elder Jeffrey R. Holland
2-7

Also: Visiting Teachers

QUOTE

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The screenshot shows the Symantec website with a dropdown menu open for the 'United States' link. The menu lists various regions and languages, including Andean Region - Spanish, Asia Pacific - English, Australia & New Zealand, Austria, Belgium, Brazil, Canada - English, Canada - French, Central America & Caribbean - Spanish, China - Simplified Chinese, Czech Republic, Denmark, Finland, France, Germany, Greece, Hong Kong - English, Hungary, India - English, Indonesia - English, Israel, Italy, Japan, Korea, Luxembourg - French, Malaysia - English, Mexico, Middle East - English, The Netherlands, Norway, Philippines - English, Poland, Russia, Singapore - English, South Africa - English, Southern Latin America - Spanish, Spain, Sri Lanka - English, Sweden, Switzerland - German, Taiwan - Traditional Chinese, Thailand - English, Turkey, United Kingdom & Ireland, United States, and Vietnam - English.

The main content area features a banner for 'Go Ahead. You've Got Norton.' introducing Norton 2008 Products. Below the banner are links for 'Upgrades', 'Renewals', 'Viruses & Risks', 'Support', and 'Vista'. The footer includes a 'RATE THIS PAGE' link and a copyright notice for 2005-2007 Symantec Corporation.



Country Sites

Either the webapp context your region JSP URI refers to doesn't exist or the calling web application does not have permission to access another web application context. If the web application exists in your application server, consult the Trouble Shooting Guide for details on how to configure your application server to support cross context forwarding.

American Samoa

- English

Estonia

- Estonian

Mexico

- Spanish
- English

Singapore

- English

Argentina

- Spanish

Fiji

- English

Netherlands

- Dutch

Slovak Republic

- Slovak

Australia

- English

Finland

- Finnish

New Zealand

- English

Slovenia

- Slovenian

Austria

- German

France

- French

Nicaragua

- Spanish

South Africa

- English

Belgium

- Dutch

French Polynesia

- English

Niue


- English

South Korea

- Korean

Navigating to localized pages issues

Identifying the list

Азия  Выберите регион

XEROX

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replay



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на новый виток Вашего
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[Йог в черном фраке](#)

[> все публикации](#)

[Phaser 6360](#)
Абсолютный скоростной лидер среди цветных принтеров для офисной печати.

[WorkCentre 3119](#)
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North America

[Canada/English](#)

[Canada/Français](#)

[United States of America](#)



Latin America and Caribbean

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[Bermuda](#)

[Brasil](#)

[Cayman Islands](#)

[Chile](#)

[Colombia](#)

[Ecuador](#)

[México](#)

[Nicaragua](#)

[Paraguay](#)

[Perú](#)

[Trinidad & Tobago](#)

[Uruguay](#)

[Venezuela](#)



Some lessons from this section

- For links to alternative language or country sites, translate link text into the language of the content pointed to
- Make it easy to find the current page when changing language or site
- Consider whether to use graphics or text, given that fonts may not be available on the user's platform for all options
- If you use text, you'll need the page encoding to be UTF-8
- Remember that pull-down lists don't support graphics, so consider alternatives
- Find a way to draw attention to a list that is recognizable regardless of language, and put it in a visible location
- Consider maps as an alternative selection mechanism

<http://www.w3.org/International/questions/qa-navigation-select>

Concluding remarks



In conclusion

- We haven't been talking about things that the localizers do, we're talking about the way content is created!
- Good internationalization practice is often just good content design.
- This is a part of Web Accessibility.
- Take a look at the material on the I18n Activity site.
- Pick up your quicktips cards here.

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