



Global Design: Characters, Language, and More

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W3C Internationalization Activity Lead

W3C Internationalization (I18n) Activity - Mozilla Firefox

File Edit View History Bookmarks Tools Help deljcio.us

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

W3C Architecture Internationalization (I18n) domain Making the World Wide Web world wide

Home About Groups Topics Techniques Resources News

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

Find i18n information

- Getting Started
- By task
- By topic
- By resource type
- Other
- 日本語訳 (Translations)

About the Activity

Groups: Core, ITS, IG

Mission, Contacts, Activity Statement

Specifications

Article & tutorial list

Participate!

- Join a Working Group
- Review a W3C specification
- Translate a specification or page
- Subscribe to the Interest Group list

Aggregated data

New! Planet i18n

Google blogsearch
Blogslines blogsearch
Technorati blogsearch
Del.icio.us search
Del.icio.us tags

News by category

All

- Articles (55)
- CSS (3)
- Feedback request (2)
- For review (10)
- Highlight (63)
- Miscellaneous (8)
- New draft (22)
- New resource (68)
- Spec review (1)
- Talks (23)
- Test (12)
- Translation (59)
- Tutorials (3)
- Upcoming (2)
- Update (31)

Search for news

All Words

Some Word

Entire phrase

Search

News archives

- April 2008 (7)
- March 2008 (6)
- February 2008 (2)
- January 2008 (2)
- December 2007 (2)
- November 2007 (2)
- October 2007 (2)
- September 2007 (4)
- August 2007 (2)
- July 2007 (9)
- June 2007 (9)
- May 2007 (2)
- More...

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



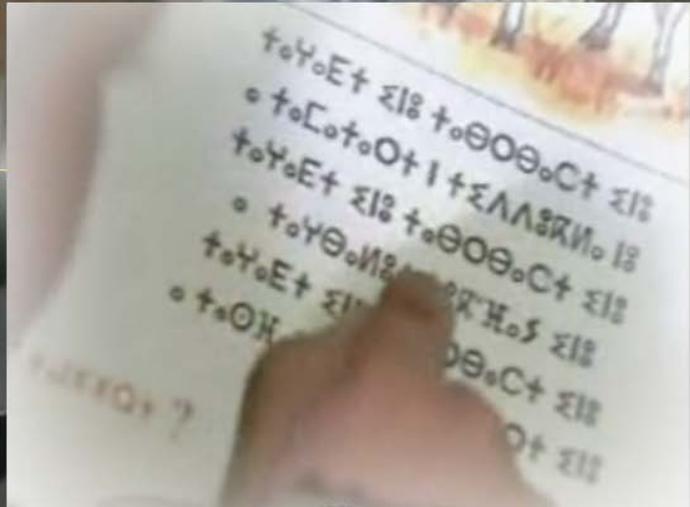
Character encoding: What's that all about?

Character encoding
The Enigma



Photo by David Blaikie





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

← Character set

。 ⊖ ⊕ × ∷ ∴ ∵ ∆ ∇
E ∃ ÷ H R ∴ ∇ ⊖ ∅
∴ ∠ ∟ × ∴ ∇ ∴ ∴ ∴
X # H C I ≠ ! ∴ ∴ ∴
Q ∴ ∴ ∴ ∴ ∴ ∴ ∴ ∴ X
∴ E ∆ ∴ ∴ ∴ ∴ ∴ ∴

	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)

	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	`	´								
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)

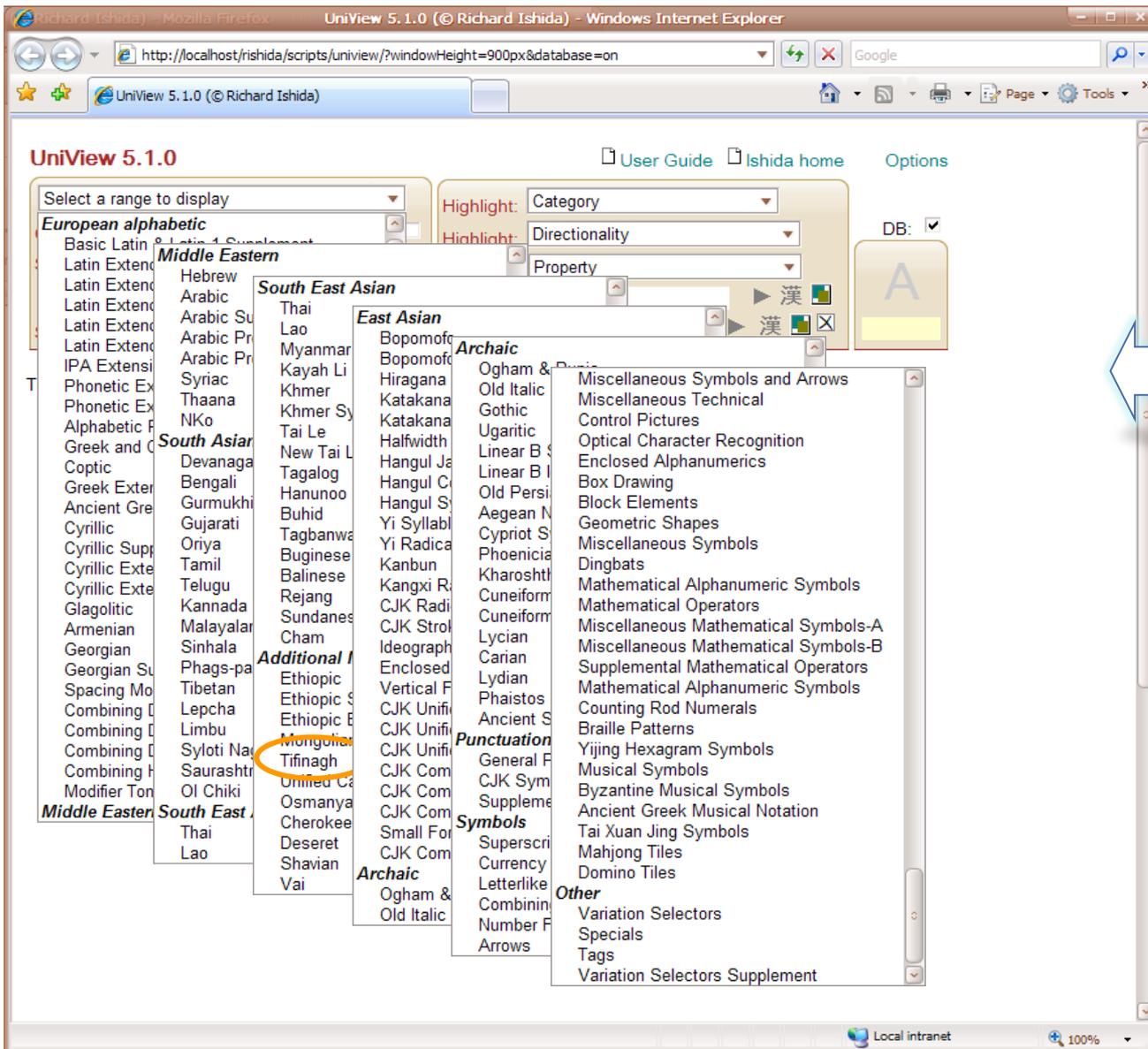
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1				0	@	P	`	p				°	ï	Π	ÿ	π
2		!	1	A	Q	a	q		™	±	A	P	α	ρ		
3		"	2	B	R	b	r		‘	²	B	□	β	ς		
4		#	3	C	S	c	s		À	’	Γ	Σ	γ	σ		
5		\$	4	D	T	d	t		ƒ	³	Δ	T	δ	τ		
6		%	5	E	U	e	u		œ	´	Δ	T	δ	τ		
7		&	6	F	V	f	v		¥	μ	E	Y	ε	υ		
8		'	7	G	W	g	w		|	¶	Z	Φ	ξ	φ		
9		(	8	H	X	h	x		§	·	H	X	η	χ		
A		)	9	I	Y	i	y		¨	’	E	Θ	Ψ	θ	ψ	
B		*	:	J	Z	j	z		©	’	H	I	Ω	ι	ω	
C		+	;	K	[	k	{		□	’	I	K	İ	κ	ï	
D		,	<	L	\	l	|		«	»	Λ	ÿ	λ	ü		
E		-	=	M	]	m	}		-	’	O	M	ά	μ	ό	
F		.	>	N	^	n	~		-	½	N	έ	ν	ύ		
		/	?	O	_	o	~		®	’	Y	Ξ	ή	ξ	ώ	
									-	’	Ω	O	ί	ο	□	

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	Taiwan	13,494
CNS 11643-1992		48,711
JIS X 0208:1997	Japan	6,879
JIS X 0212-1990		6,067



Unicode

All languages

Tifinagh Unicode block

	2D3	2D4	2D5	2D6
0	ⵏ	ⵍ	ⵎ	ⵐ
1	ⵑ	ⵒ	ⵓ	ⵔ
2	ⵖ	ⵗ	ⵘ	ⵙ
3	ⵛ	ⵜ	ⵝ	ⵞ
4	ⵟ	ⵠ	ⵡ	ⵢ
5	ⵤ	ⵥ	ⵦ	ⵧ
6	⵩	⵪	⵫	
7	⵭	⵮	ⵯ	
8	⵱	⵲	⵳	
9	⵵	⵶	⵷	
A	⵹	⵺	⵻	
B	⵽	⵾	⵿	
C	ⶀ	ⶁ	ⶂ	
D	ⶄ	ⶅ	ⶆ	
E	ⶈ	ⶉ	ⶊ	
F	ⶌ	ⶍ	ⶎ	

Coded character set

Code point

2D63 (hexadecimal)
11619 (decimal)

○ 2D30 𠄎 2D63 ○ 2D53 H 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:

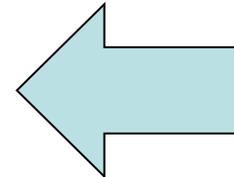
Unicode



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



- `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

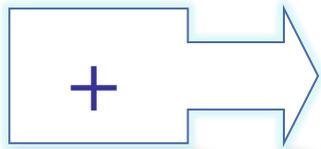
- `<%@ page contentType="text/html;charset=UTF-8" %>`

ASP

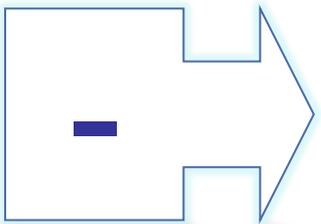
- `<%Response.charset="utf-8"%>`

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



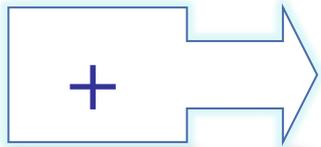
Always declare the encoding
inside the document, too !

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

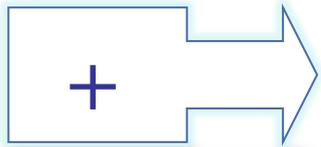


- ◆ Document can be edited or read from CD or hard disk, etc.
- ◆ Dynamic documents can be saved to disk
- ◆ Helps developers, testers, or translation production managers perform a visual check
- ◆ The only in-document alternative

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

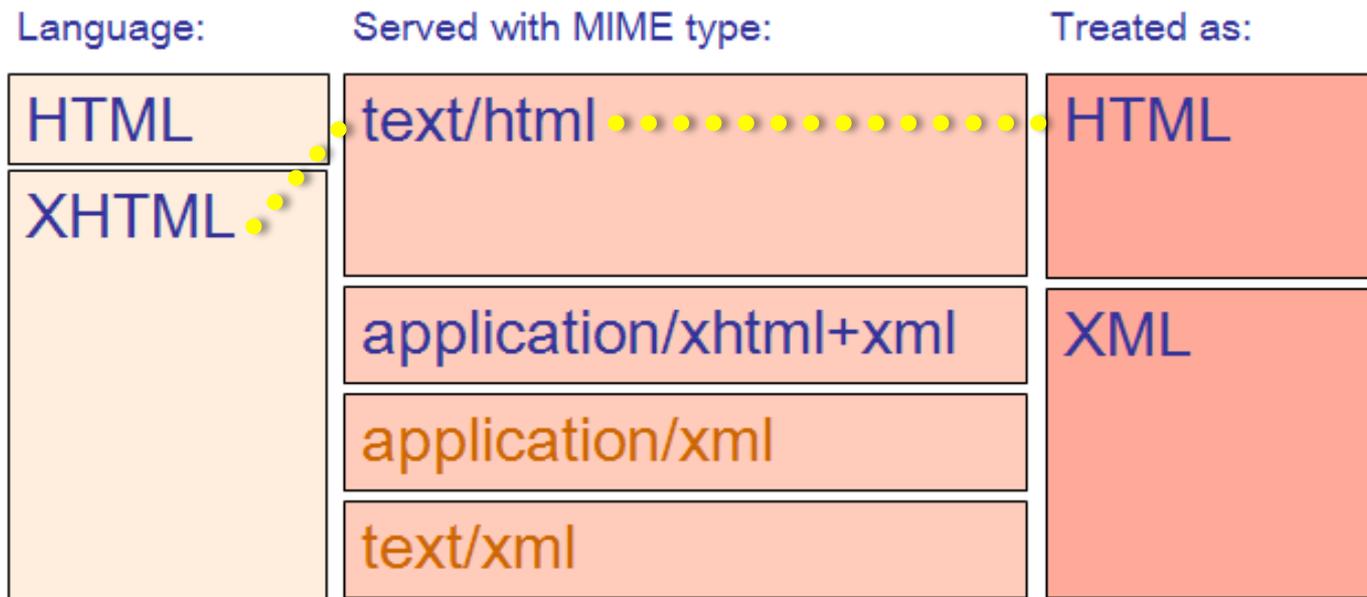
- ◆ Required if not UTF-8 or UTF-16 !
- ◆ First thing in the file
- ◆ Useful even with UTF-8 or UTF-16
- ◆ Use preferred names from the IANA registry
- ◆ Avoid unregistered names (ie. x-...)

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



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

and?

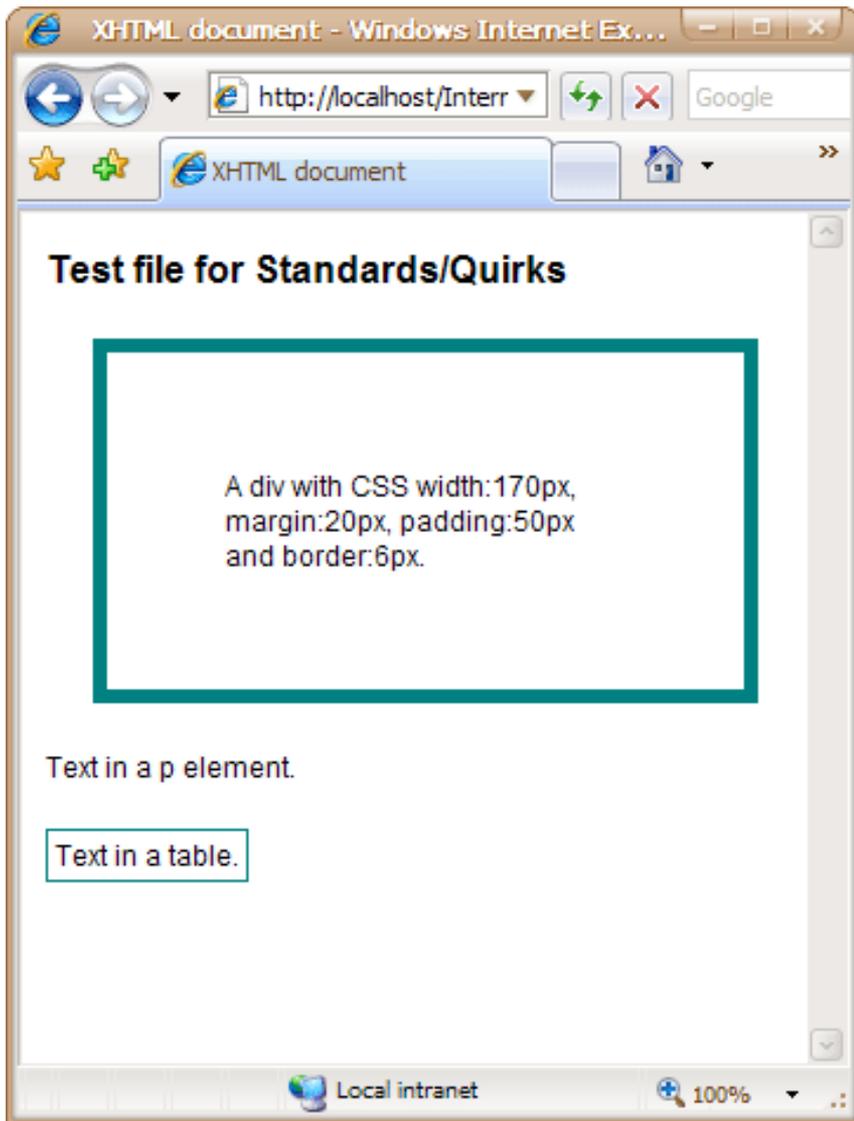
or?

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

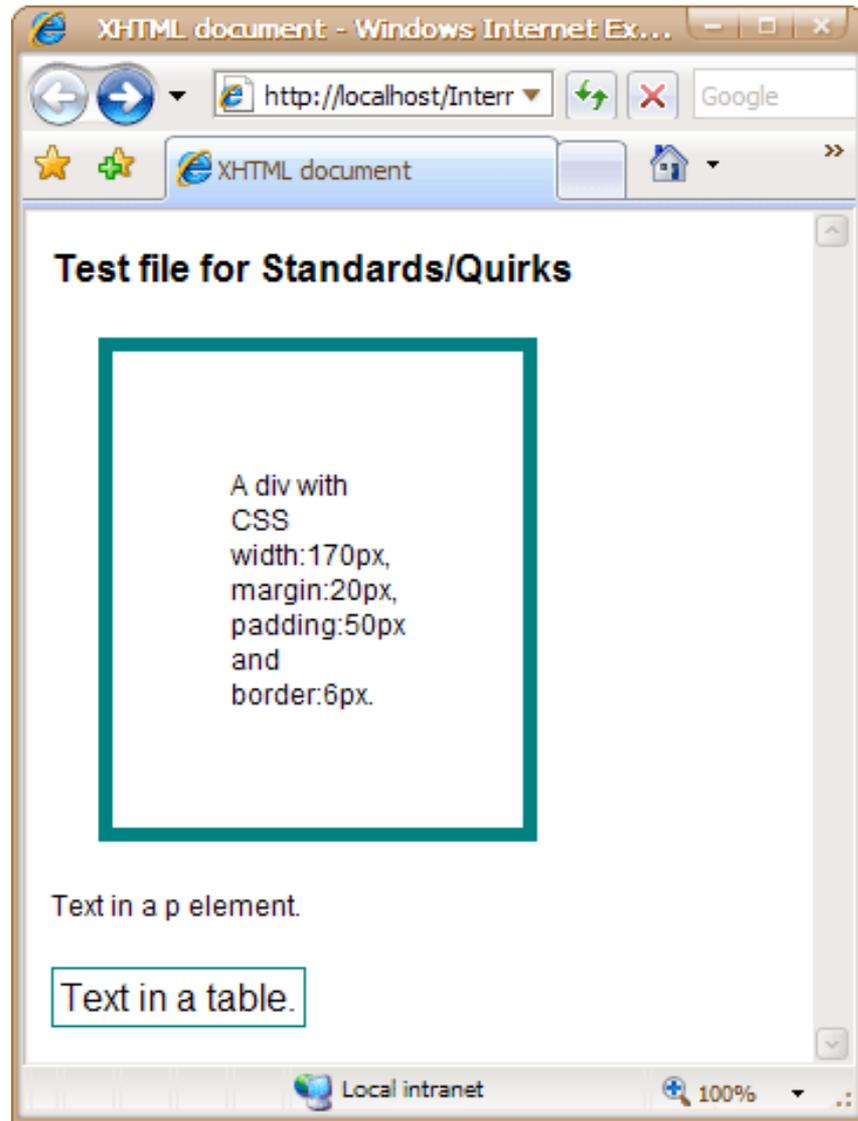
```
<?xml version="1.0" encoding="UTF-8"?>
```

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">
```



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



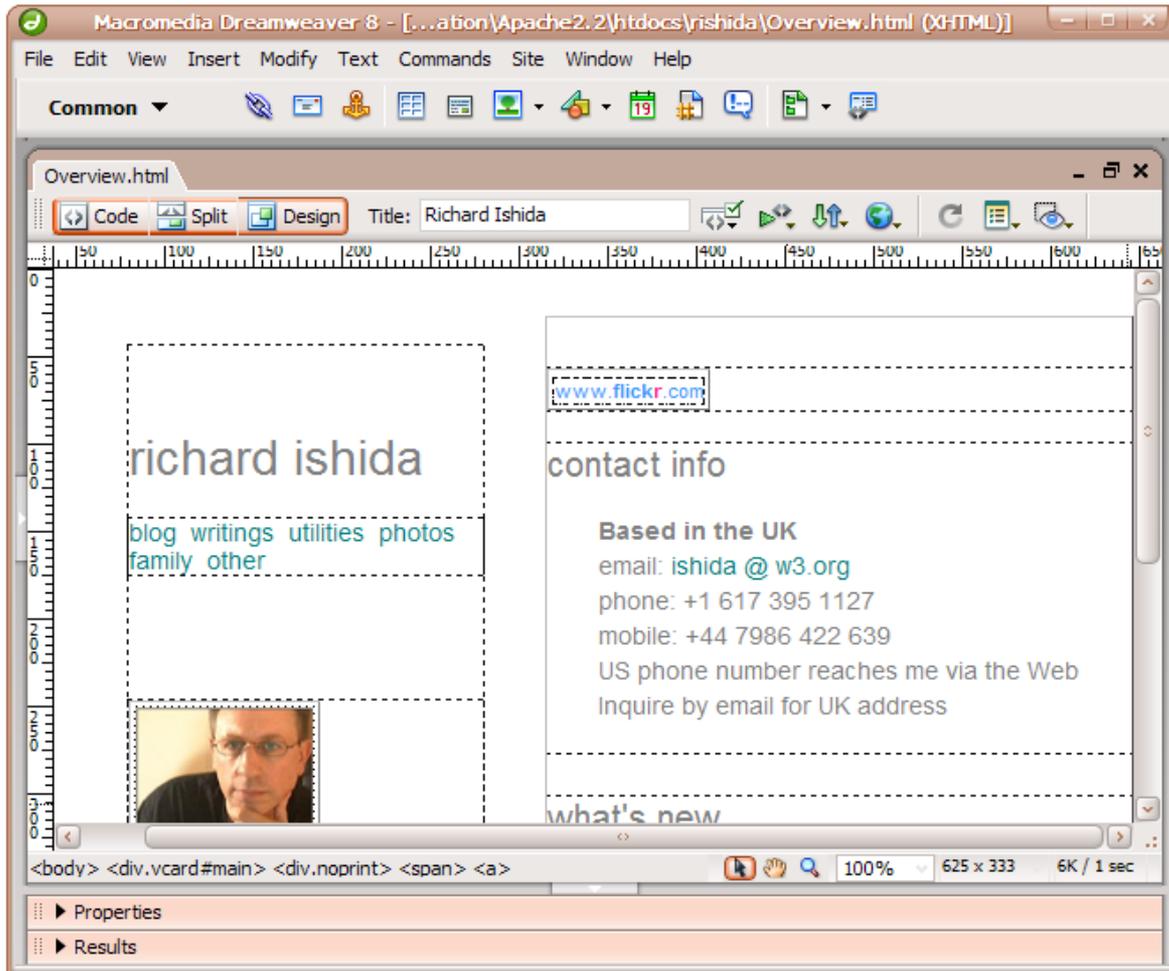
Step 2: Save your data in the right encoding

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

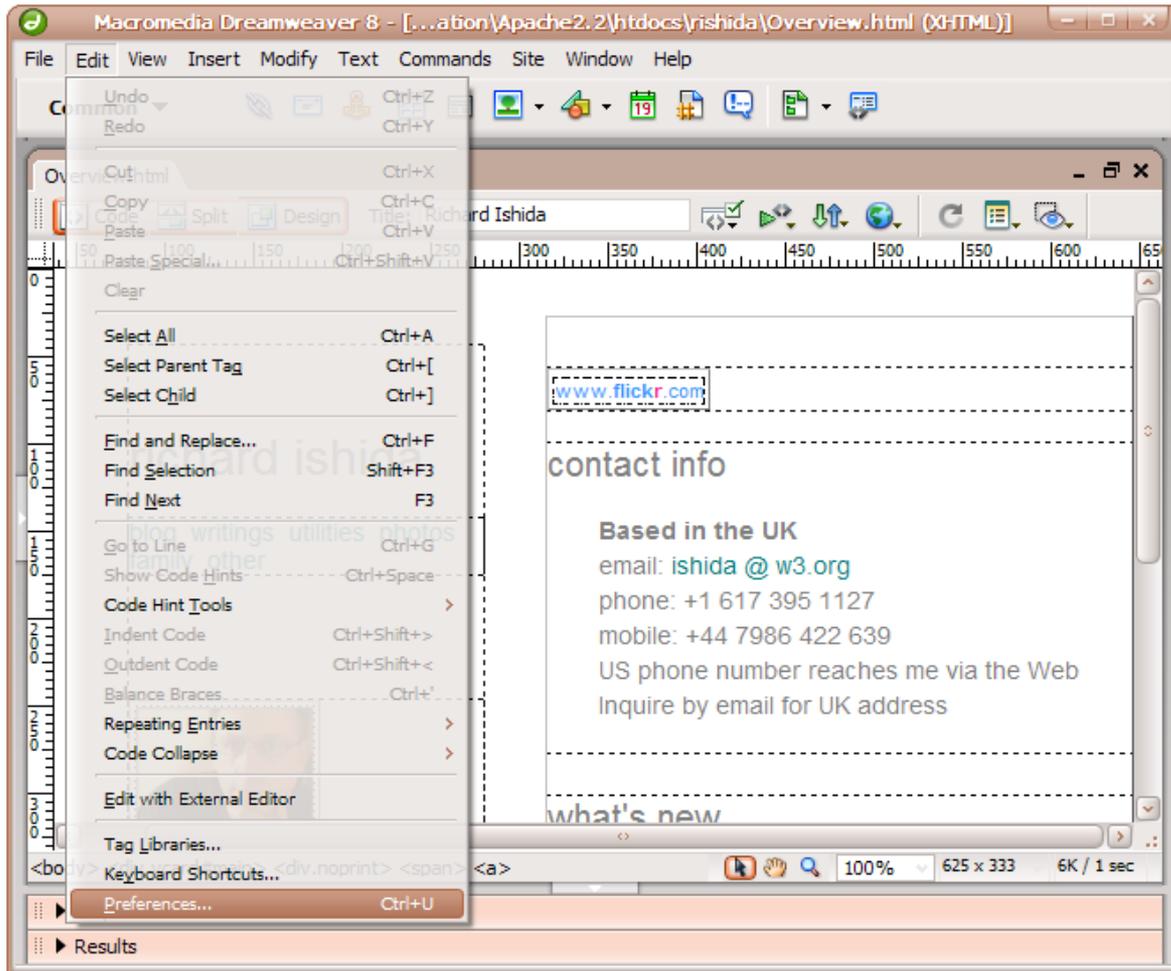
you need the content to
be in the right sequence
of bytes !



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

The image shows a screenshot of the Macromedia Dreamweaver 8 interface. The main window displays a code editor for 'Overview.html' with a title of 'Richard Ishitani'. A 'Preferences' dialog box is open, showing the 'New Document' category. The 'Default document' is set to 'HTML' and the 'Default extension' is '.html'. A callout box highlights the 'Default encoding' dropdown menu, which is set to 'Unicode (UTF-8)'. Below this, there is a checked checkbox labeled 'Use when opening existing files that don't specify encoding'. The 'Validator' section at the bottom of the dialog has a checked checkbox for 'Show New Document dialog box on Control+N'. The 'OK', 'Cancel', and 'Help' buttons are visible at the bottom right of the dialog.

Step 2: Save your data in the right encoding

Macromedia Dreamweaver 8 - [...\ation\Apache2.2\htdocs\rishida\Overview.html (XHTML)]

File Edit View Insert Modify Text Commands Site Window Help

Common

Overview.html

Code Split Design Title: Richard Ishida

richard ishida

blog writings utilities photos

fan

<body> <div.w

Properties

Results

Preferences

Category: New Document

General

Accessibility

Code Coloring

Code Format

Code Hints

Code Rewriting

Copy/Paste

CSS Styles

File Compare

File Types / Editors

Fonts

Default document: HTML

Default extension: .html

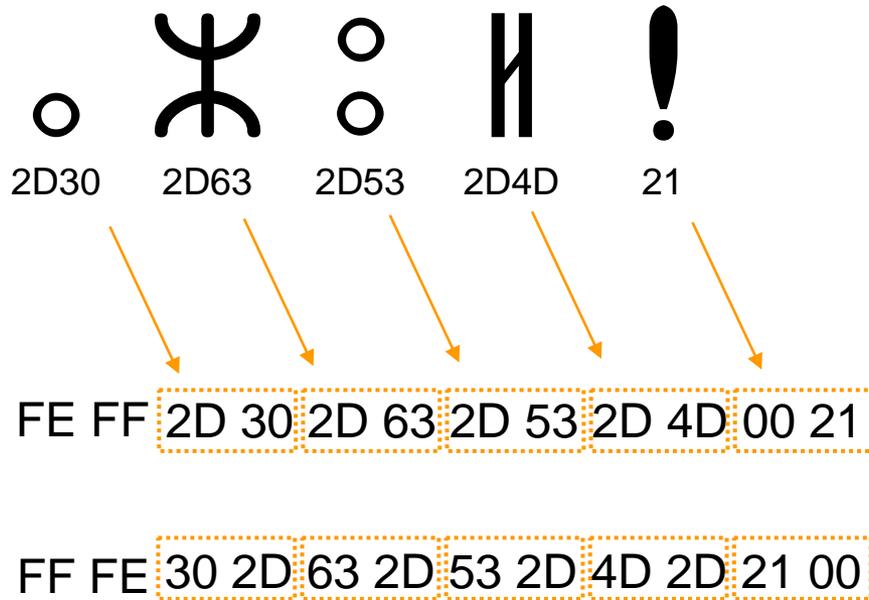
Default Document Type (DTD): XHTML 1.0 Transitional

Unicode Normalization Form: C (Canonical Decomposition, followed by c)

Include Unicode Signature (BOM)

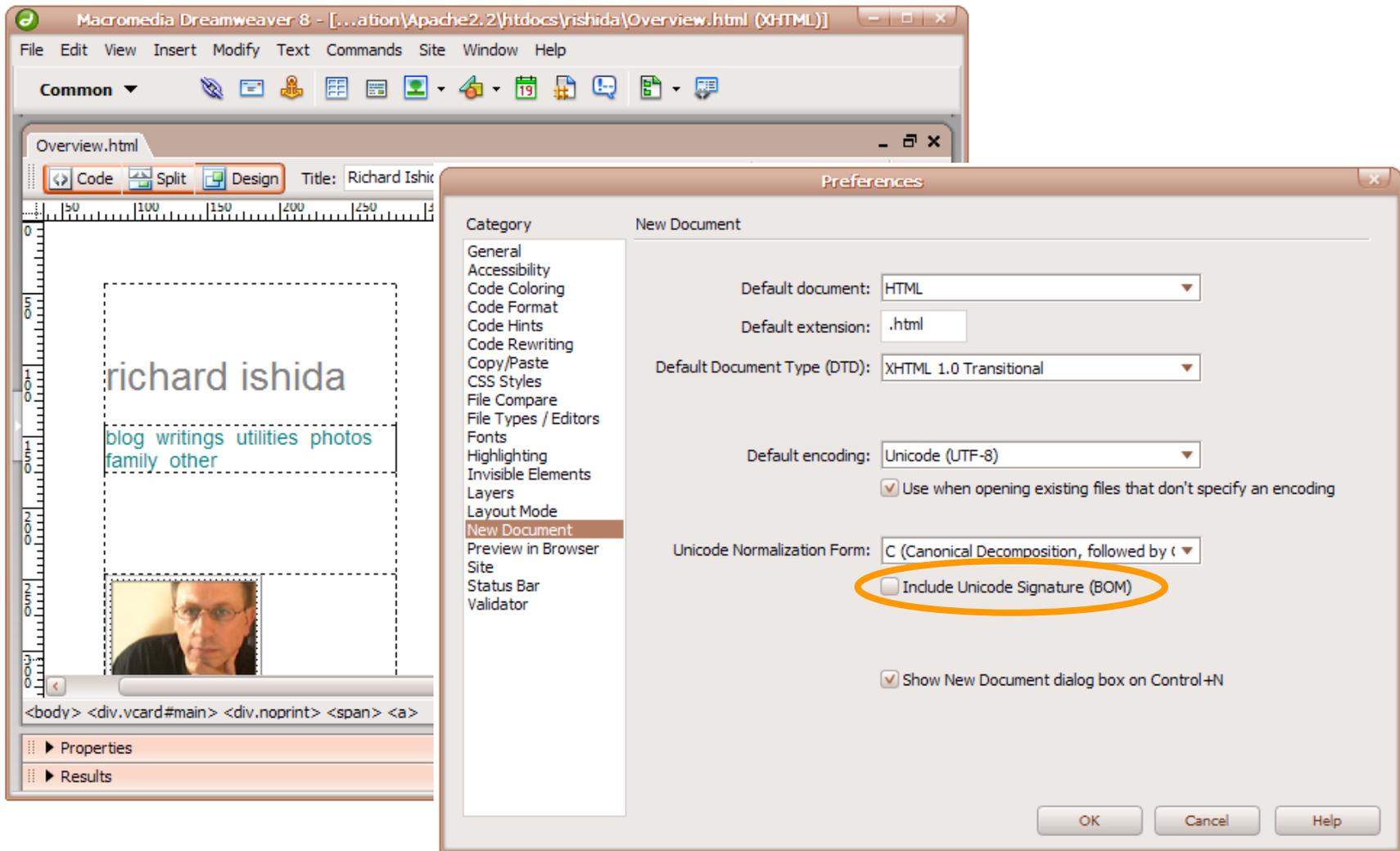
OK Cancel Help

Step 2: Save your data in the right encoding

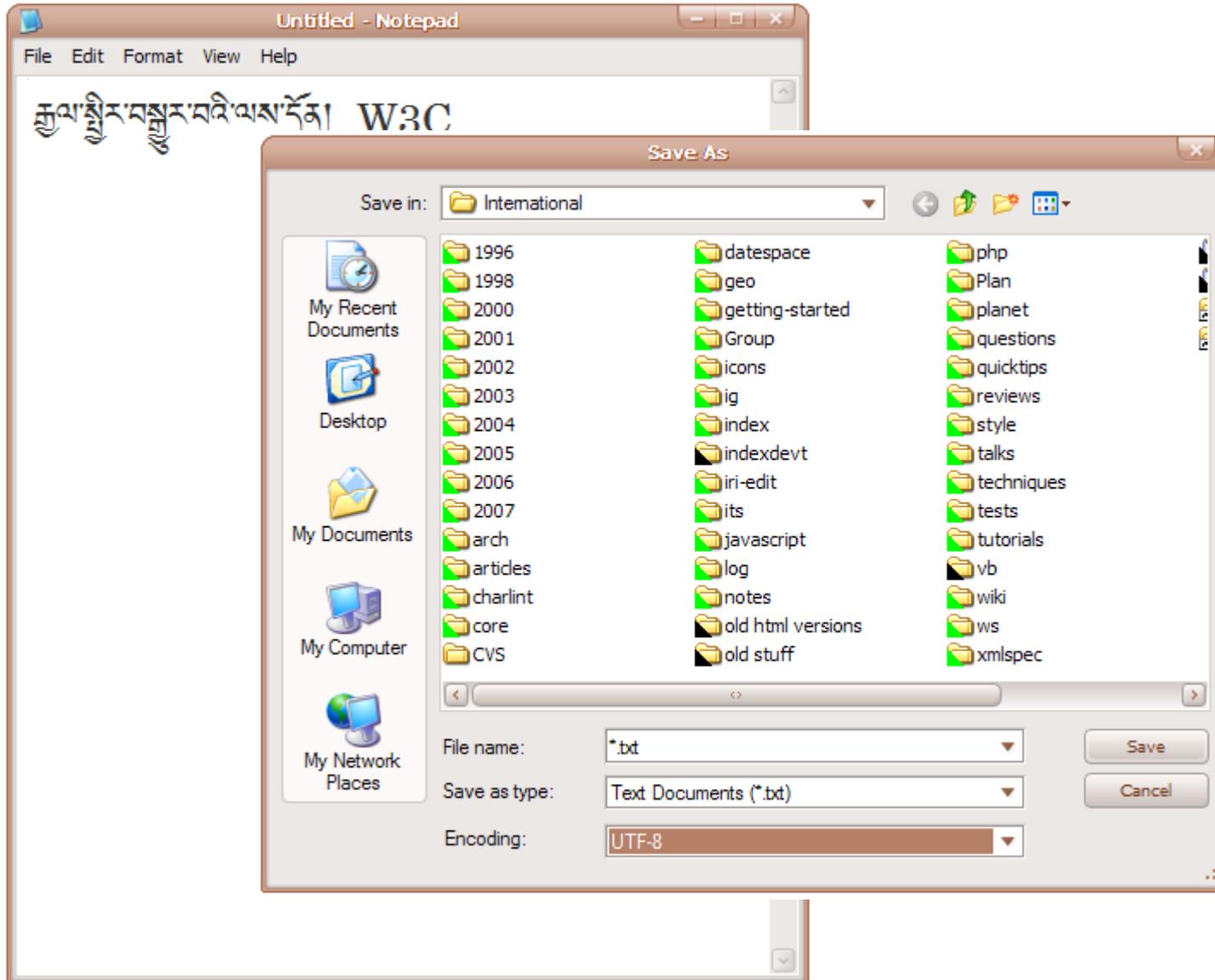


ï»¿ in UTF8

Step 2: Save your data in the right encoding



Step 2: Save your data in the right encoding





Signed in as r12a [Help](#) [Sign Out](#)

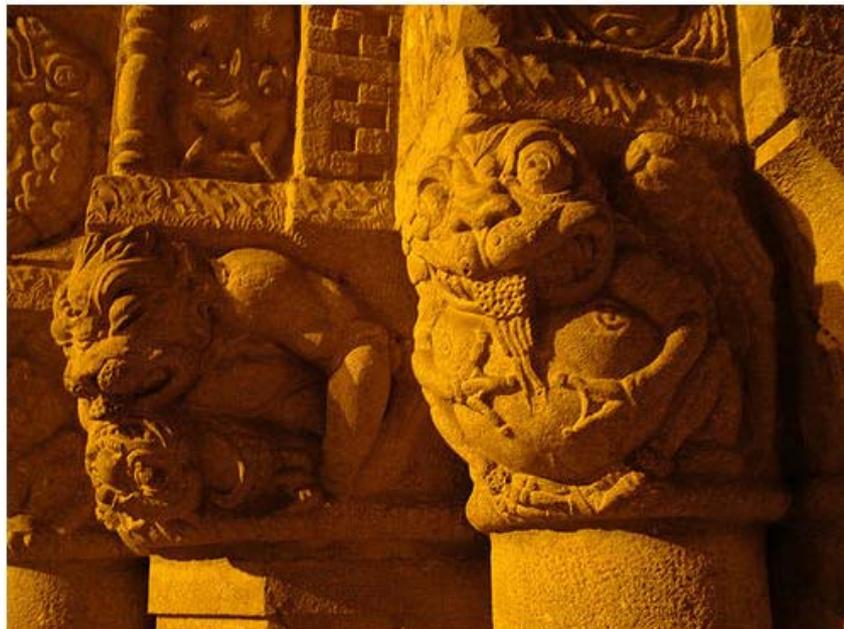
[Home](#) [You](#) [Organize](#) [Contacts](#) [Groups](#) [Explore](#)

[Search](#)

Chateau de La Napoule

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[ADD NOTE](#) [SEND TO GROUP](#) [ADD TO SET](#) [BLOG THIS](#) [ALL SIZES](#) [PRINTS & MORE](#) [ROTATE](#) [EDIT PHOTO](#) [DELETE](#)



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- [Côte d'azur \[x\]](#)

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- [Photo stats](#)
- [Viewed 334 times \(Not including you\)](#)

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](#))

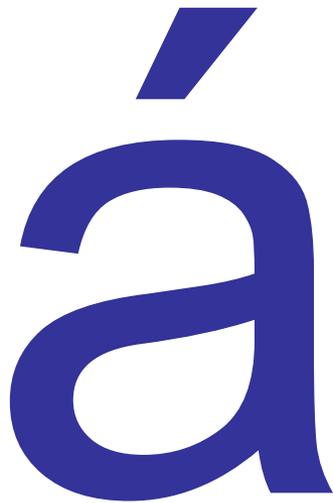
Some lessons from this section

- 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



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

NCR = Numeric Character Reference

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.

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

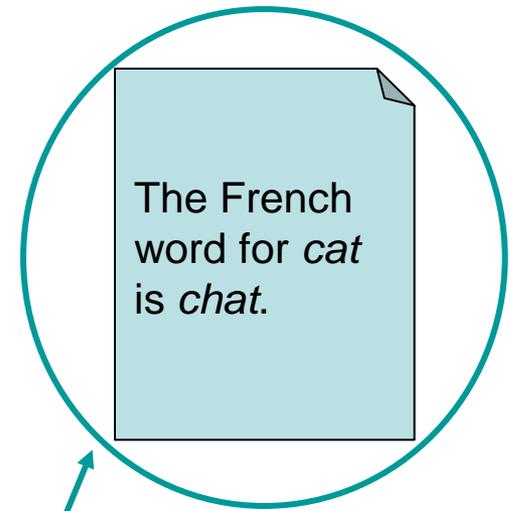
- ◆ the language of a specific range of text
- ◆ used for processing such as text-to-speech, styling, etc.
- ◆ can indicate only ONE language at a time



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

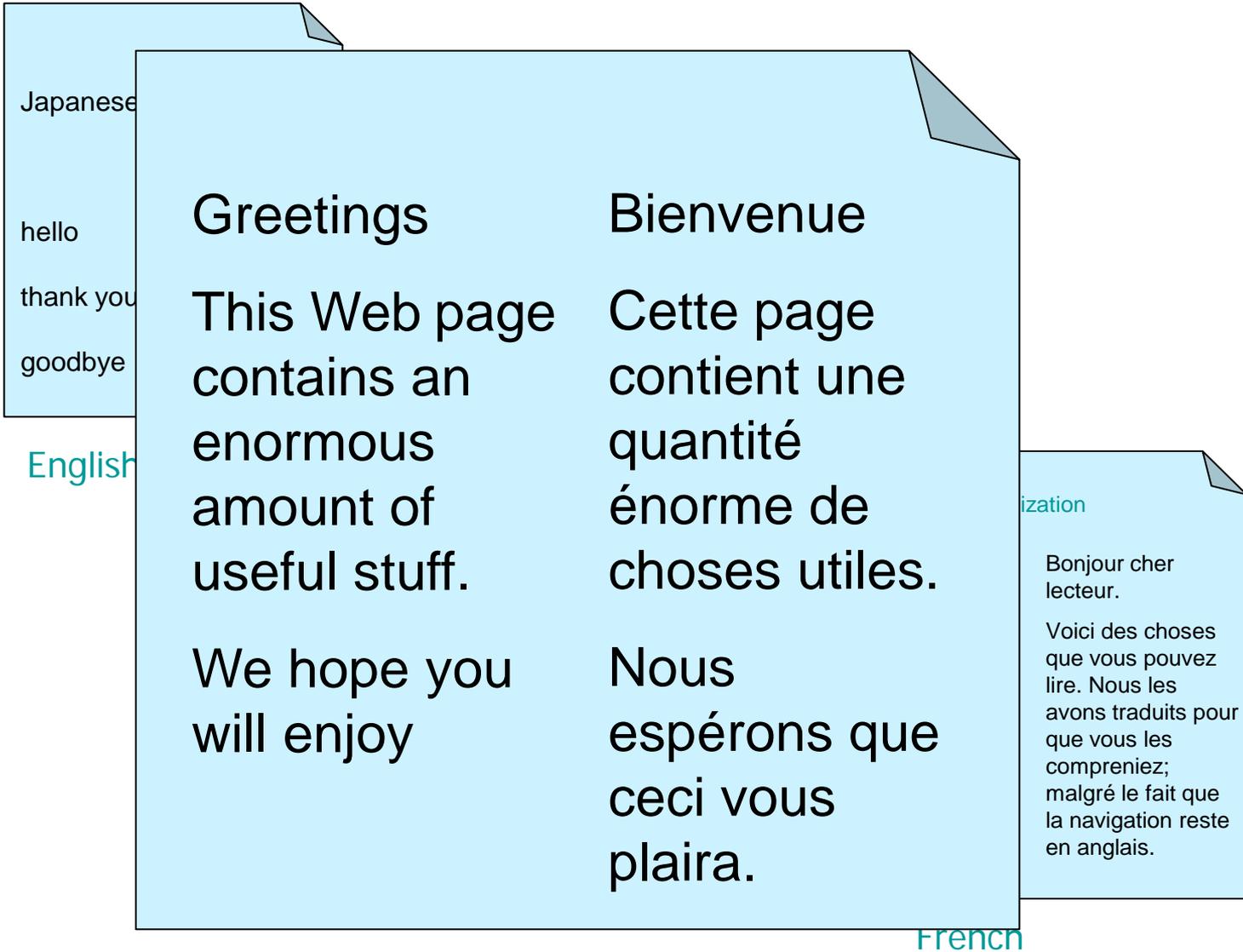
hello	今日は
thank you	ありがとう
goodbye	さようなら

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

MyOrganization

Go here	Bonjour cher
Go there	lecteur.
Go elsewhere	Voici des choses
Go back	que vous pouvez
	lire. Nous les
	avons traduits pour
	que vous les
	comprenez;
	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	Bonjour cher lecteur.
Go there	Voici des choses que vous pouvez lire. Nous les avons traduits pour que vous les
Go elsewhere	compreniez; malgré le fait que la navigation reste en anglais.
Go back	

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 that the results are not well-formed 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

- 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



Text size



Compound nouns

Input processing features

Eingabeverarbeitungsfunktionen

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



Seals and sealions at Pier 39

Encargar impresión



Global settings

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

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

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

Graphics in fixed width boxes

Idioma de la interfaz

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

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



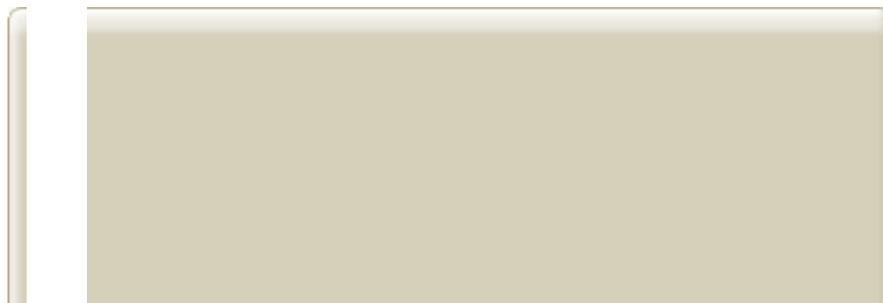
```
.box h3 {  
  margin: 0;  
  padding: 6px 8px 4px 10px;  
  font-size: 130%;  
  color: #333;  
  background: url(img/h3-bg.gif)  
             no-repeat top left;  
  border-bottom: 1px solid #E0CFAB;  
}
```

Bahasa Pengantar untuk Penelusuran

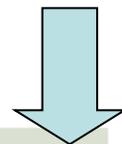
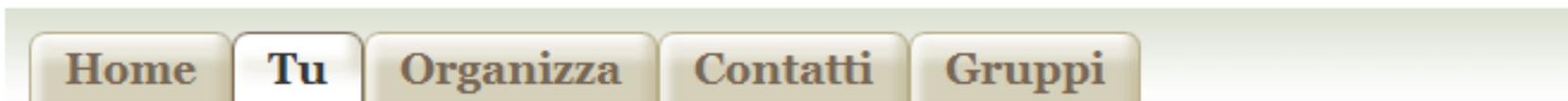
- Arab
- Inggris
- Finlandia
- Perancis
- Italia
- Jepang
- Rusia
- Spanyol
- Swedia

```
.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;  
}
```





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



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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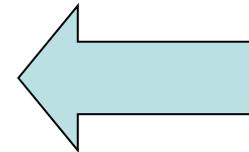
Tell us what you think (English).

 [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



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:

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 results per page.

Navigating to localized pages

Language links


تنظیمها | [شگردهای 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 می شود)

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

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"/> فرانسوی	<input type="checkbox"/> یرتغالی
<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"/> زاپنی	<input type="checkbox"/> لیتوانیایی	<input type="checkbox"/> کاتالانیايي
<input type="checkbox"/> انگلیسی	<input type="checkbox"/> سوئدی	<input type="checkbox"/> مجارستانی	<input type="checkbox"/> کره ای
<input type="checkbox"/> ایتالیایی	<input type="checkbox"/> صربی	<input type="checkbox"/> نروژی	<input type="checkbox"/> کرواتی
<input type="checkbox"/> ایسلندی	<input type="checkbox"/> عبری	<input type="checkbox"/> هلندی	

شمار یافته ها حالت پیشفرض Google (ده یافته در هر صفحه) بر سرعت جست و جوی شما می افزاید در هر صفحه 10 یافته فهرست شود.

بجز یافته ها فهرست یافته ها در بجز تازه ای نمایش داده شود.

تنظیمهای دلخواه من ذخیره شوند

در پایان 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.)

Navigating to localized pages

Language links

تنظیمها شگردهای جست و جو | همه چیز درباره Google

تنظیمهای دلخواه من ذخیره شوند دریابان تنظیمهای خود را ذخیره کنید و سپس به بخش جست و جو بازگردید.

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

<p>زبان نمایش گوگل</p> <p>نمایش نکته ها و پیام های Google به:</p> <p>فارسی</p>	<p>زبان جستجو</p> <p>جستجو در صفحاتی به هر زبان (سف)</p> <p>تنها در صفحاتی به این زبان(ها) بگر</p> <table border="0"> <tr> <td><input type="checkbox"/> آلمانی</td> <td><input type="checkbox"/> بلغاری</td> </tr> <tr> <td><input type="checkbox"/> استونیایی</td> <td><input type="checkbox"/> ترکی استانب</td> </tr> <tr> <td><input type="checkbox"/> اسلواکی</td> <td><input type="checkbox"/> دانمارکی</td> </tr> <tr> <td><input type="checkbox"/> اسلونیایی</td> <td><input type="checkbox"/> روسی</td> </tr> <tr> <td><input type="checkbox"/> اسپانیایی</td> <td><input type="checkbox"/> رومانیایی</td> </tr> <tr> <td><input type="checkbox"/> اندونزیایی</td> <td><input type="checkbox"/> زاپنی</td> </tr> <tr> <td><input type="checkbox"/> انگلیسی</td> <td><input type="checkbox"/> سوئدی</td> </tr> <tr> <td><input type="checkbox"/> ایتالیایی</td> <td><input type="checkbox"/> صربی</td> </tr> <tr> <td><input type="checkbox"/> ایسلندی</td> <td><input type="checkbox"/> عبری</td> </tr> </table>	<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
<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																		
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<input type="checkbox"/> انگلیسی	<input type="checkbox"/> سوئدی																		
<input type="checkbox"/> ایتالیایی	<input type="checkbox"/> صربی																		
<input type="checkbox"/> ایسلندی	<input type="checkbox"/> عبری																		
<p>شمار یافته ها</p> <p>حالت پیشفرض Google (ده یافته در هر صفحه)</p> <p>در هر صفحه 10 یافته فهرست شود.</p>	<p>فهرست یافته ها</p> <p><input type="checkbox"/> فهرست یافته ها در پنجره تازه ای نمایش داده شود.</p>																		

تنظیمهای دلخواه من ذخیره شوند دریابان تنظیمهای خود را ذخیره کنید و سپس به بخش جست و جو بازگردید.

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

CHANGING 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

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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

The screenshot shows the Nortel website header with a navigation menu (SOLUTIONS, PRODUCTS, SERVICES, SUPPORT, ABOUT, NEWS & EVENTS, HELP) and a search bar. A 'CHANGE LOCATION' dropdown menu is open, displaying a list of countries and regions. Below the header, there is a main banner for 'UNIFIED COMMUNICATIONS' with a 'REQUEST A QUOTE TODAY' button. A navigation bar at the bottom of the banner contains numbered links 1 through 5.

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> READ THE CASE STUDY

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



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	

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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.' with the text 'Introducing Norton 2008 Products' and a 'See what's new >' link. Below the banner are navigation links for 'Upgrades', 'Renewals', 'Viruses & Risks', 'Support', and 'Vista'. Further down, there are sections for 'Products', 'Business Solutions', and 'Buy Online', each with sub-links. A 'Rate this page' link is visible at the bottom left of the main content area.

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

Азия Выберите регион

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Сен 14 Компания Xerox объявляет об открытии офиса в Ташкенте

Сен 13 XEROX проводит семинары "Innovate'07" совместно с экспертами цифровой печати

> все новости

Публикации

Сен 20 «Computer Club», № 7-8 Йог в черном фраке

> все публикации

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[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/>