

Interoperability applied to the web

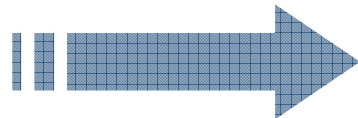
b-i branding. technology. integration.

Why Interoperability ?

Definition :

Interoperability is a property referring to the ability of diverse systems and organizations to work together (inter-operate)

» <http://en.wikipedia.org/wiki/Interoperability>



Needs for norms & standard !

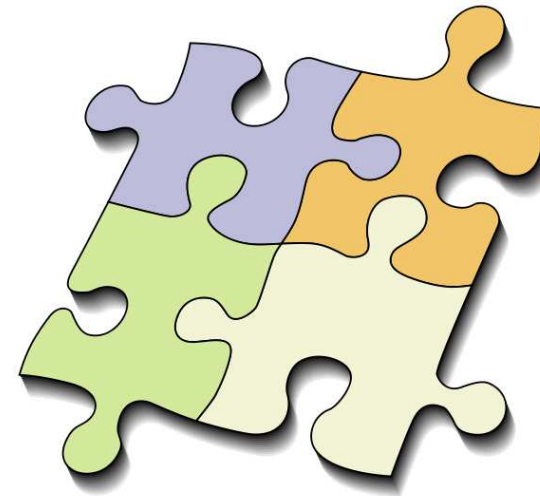
Interoperability ?

- Application to save in common formats

- > CSV
- > "Excel" / numeric, DIF etc...
- > RTF
- > HTML
- > iCal
- > ...

- Ability to "plug-in" :

- > any mailer to send email
- > LDAP, AD
- > Other databases
- > Web services ?
- > ...



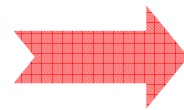
Open Source Software & Interoperability

OSS are usually better for interoperability :

- not proprietary = no "turf" to defend
- need to catch audience
- generally not specific to an OS
- unix's philosophy "pipe" support
- good OSS tends to raise standards
- internet history

Before internet

- Each country / zone has its own:
 - > Character-set
 - > Time
 - > Some Formats (date, prices etc...)
 - > "pre"-configurations (excel formulas language...)
 - > Cryptography laws



Very difficult to exchange data

It is still the case of course !



But norms and standards are getting better and better !

And now the web...

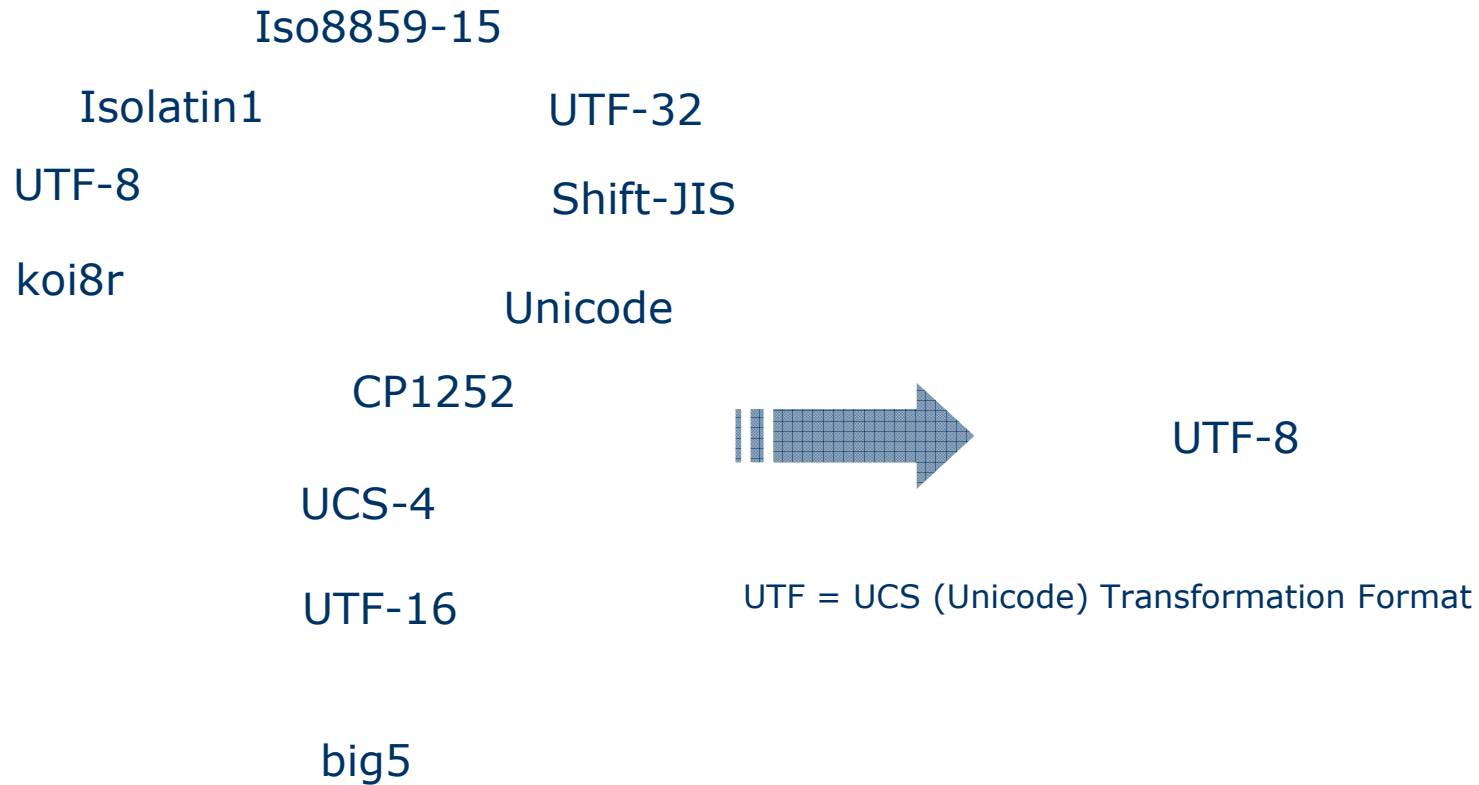
Overview of the norms
to understand each others.

b-i branding. technology. integration.

Selected History

- Oct 29, 1969 : birth of ARPAnet
- Jan 1, 1983 : first TCP/IP WAN
- 1989 : ARPAnet opens to commerce & WWW birth
- Oct 1991 : Unicode 1.0
- Jan 1993 : UTF-8
- 1993 : UCS ISO/IEC 10646-1:1993
- Dec 1996 : CSS 1.0
- 1997 : birth of WAI
- 1998 : Section 508
- May 1998 : CSS 2.0
- May 1999 : WCAG (WAI Guideline)
- Dec 1999 : HTML 4.01 (ISO/IEC 15445:2000 in may 2000)
- by 2000 : All major browsers supports UTF-8 (western glyphs)
- Jan 2000 : XHTML 1.0
- May 2001 : XHTML 1.1

Character sets & transformation formats



To be used unless special asian requirements

HTML, XHTML & CSS in brief

- Markup language, defines the structure.
- As of 2009, choose between HTML 4.01, XHTML 1.0 Transitional or XHTML 1.1 Strict (and derivatives)
- CSS = Cascading Style Sheet : content != layout
- CSS 2.1 supported by all major browsers (kind of)
- Accessibility = set of rules (img alt text, href titles, JS not mandatory, Dynamic menus mainly in CSS etc...)

Validations

- Robots are interoperability's best friends...

Validate the (X)HTML : <http://validator.w3.org/>

Validate the CSS : <http://jigsaw.w3.org/css-validator/>

Validate the accessibility : <http://www.cynthiasays.com/>
<http://www.tawdis.net>
<http://wave.webaim.org/>

From validation to fundamentalism

... or not ?

Try to validate the HTML :

<http://www.mi-ange.net/blog/msg.php?id=79&lng=en>

→ 29 errors

And :

<http://www.mi-ange.net/blog/msg.php?id=75&lng=en>

→ Success

But same template...

Going too far = HTML 1.0 Strict !

→ Compromises ! Sometimes the software does it for you, above FCK.

29 errors

Home this.about about.me Welcome...

2009.03.11 @16:27

The best regexp possible for email validation even in javascript

For a while I sometimes had a look on this page : <http://fightingforalostcause.net/misc/2006/compare-email-regexp.php>

for a good regexp to validate emails.

I thought the idea was neat : finding some of the most used regexps on the web and compare them thanx to a good unit test with an interesting set of valid and invalid emails.

I totally agree with lan that "It's my philosophy that **it's better to accept a few invalid addresses than reject any valid ones**, so I'm shooting for 0 false-positives and as few false-negatives as possible."

Also sadly his winning regexp does not seem to work in javascript because of advanced regexp features that are [not supported in javascript](#).

And since the second one on his list seemed simpler and easier to enhance while not far from the finishing line...

Here is my attempt to sanitize the world of email addresses :

based Warren Gaebel's regexp1. /¹^[²-a-z0-9~!\$%^&* _+=}{\'}+<sup>(\. [-a-z0-9~!\$%^&* _+=}{\'}+)*@([a-z0-9_-][a-z0-9_-]*\.[a-z0-9_-]+)*\.(aero|arpa|biz|com|coop|edu|gov|info|int|mil|museum|name|net|org|pro|travel|mobi|[a-z][a-z])|([0-9]{1,3}\. [0-9]{1,3}\. [0-9]{1,3}\. [0-9]{1,3})|([0-9]{1,5})?\$/i

Here are the results :

Should be Valid:

- l3tt3rsAndNumb3rs@domain.com : Valid
- has-dash@domain.com : Valid
- hasApostrophe.o'leary@domain.org : Valid
- uncommonTLD@domain.museum : Valid
- uncommonTLD@domain.travel : Valid
- uncommonTLD@domain.mobi : Valid
- countryCodeTLD@domain.uk : Valid
- lettersInDomain@911.com : Valid
- underscore_inLocal@domain.net : Valid
- IPInsteadOfDomain@127.0.0.1 : Valid

Success

Home | **this.about** | **about:me** | Welcome...

2008.11.22 @14:20

About topology and formatting of concepts presented on screen

So here is the new interface of one of the oldest services on internet used by well hundreds of millions of users throughout the world.

We can say one thing : after 15 years while [hotmail](#) persisted to give us a [textarea](#) as large as 400x300 pixels to write our mobiletext mess... oh sorry I meant mail even on a 24 inches screen (the very same one I'm writing on at the moment), they hopefully and eventually get it right this time : yes hotmail the most important part of a webmail is ... about writing the mail indeed. Kudoos to you.

But my designers friends please oh please for the new year, have mercy and dont make anymore design where actions (links and buttons) are not represented without any discriminant topology or formatting for us to see that they are actions !

Oh ok when you put the mouse over the text a wonderful "underline" magically appears under it like we see more and more often in the « Web 2.0™ purified designs » but the feedback of a "hover" is not expected to be a substitute to a "naked eye" classification and discrimination between simple text and actions. This is just to signify to the user that the interface reacts to the fact that you are about to click to the action below (usually by lighthening the conect, small 3D effect, boxed effect etc...)

Have fun to find the list of possible actions in the attached screenshot... and the "normal" portions of completely inactive text !

I'll offer 1 [hotmail](#) account to anybody able to get everything right without having access to the real application and painfully scroll your mouse to every 10x10 pixels as I have to do when using it.

Maybe this is the latest feature in accessibility : people using screenreaders are now quicker to use the service then people blessed with good-sighted eyes...

Note : at least the ad is clear !

Note 2 : no the user is not in the "gestion des dossiers" (folders management) or in "confidentialité" (Privacy)

W3C CSS ✓
W3C XHTML 1.0 ✓

Friends:
[[Nathanaël](#)]
[Le Coin de Kat](#)
[Linux Nerd](#)
[Mathilde's Universe](#)
[Photos saintaises](#)

Photos:
China pictures processed
40%

Experia.fr C'est hiver, profitez d'une offre qui a du goût...

Windows Live™ Démarrer Hotmail Spaces OneCare Plus MSN Rechercher sur le Web RedZone Déconnexion

Hotmail Envoyer | Enregistrer le brouillon Joindre | Orthographe Texte enrichi | Annuler Options

redzonemb@hotmail.com
Boîte de réception
Courrier indésirable

De : redzonemb@hotmail.com
À : []
Champs Cc/Cci

Web interoperability ?

Why ?

- Search engines recognition
- Better linkage (see SEF)
- Faster loading and easier maintenance
- Screen reader for persons with disabilities
- Webclipping, crawling, sharing, etc...

(X)HTML + CSS ok, now what ?

- Deep linking
- Search Engine Friendly Urls (SEF)
- HTML Semantic, POISH
- Web Semantic ? (RSS, RDF, micro formats...)

...

Deep Linking

- Web is about... links !
- Never rely on sessions to get to a "public" information
- Use flash as a content not as a container
- If you absolutely wants to use flash for the container → use deep links to point to different pages
- Beware of Web 2.0 : create links for your AJAX apps.
 - > In both cases, the anchor can be quite useful to give an hint to the deep link mechanism. Such as :
http://www.site.com/home.php#flash_page_2

Search Engine Friendly urls

= meaningful urls !

<http://www.mi-ange.net/blog/msg.php?id=79&lng=en>

or ?

http://www.mi-ange.net/blog/The_best_regexp_possible_for_email_validation.html

Mainly adopted thanx to blog engines after 2002.

Works also great for subcategorisation :

http://www.site.com/articles/science/mathematics/how_to_make_a_divison.html

→ Tends to be RESTful (for GET) without all constraints.

HTML Semantic / POSH

```
<div>
  <div class="big">This is my Title</div>
    Introduction to the text
  <div class="subtle">lets talk about divs</div>
    This is my text
  <br />
  Here are my notes
</div>
```

```
<div>
  <h1>This is my Title</h1>
    <p>Introduction to the text</p>
  <h2>lets talk about divs</h2>
    <p>This is my text</p>
    <p class="notes">Here are my notes</p>
</div>
```

HTML Semantic : Titles

- It's important to get a clean TOC for screen readers and readability.

```
<h1> 1st section </h1>  
  <h2> 1st title </h2>  
  <h2> 2nd title </h2>  
    <h3> subtitle </h3>  
<h1> 2nd section </h1>  
<h1> 3rd Section </h1>  
  <h2> 1st title </h2>  
    <h3> subtitle </h3>  
  <h2> 2nd title </h2>
```

HTML Semantic : Links

Linked text is important !

BAD : To see pictures of my baby `Click here`

GOOD :

Here are some `pictures of my baby`

Going toward the Semantic Web ?

RDF, microformat etc...

Future of norms

- UNICODE, cur = 5.1, next = 5.2 Fall 2009
- HTML, cur = 4.1, next = 5 release ???
- XHTML, cur = 1.1, next = 2.0 end of 2009 ?
next = 5.0 see HTML5
- CSS, cur = 2.1, next = 3.0 ???

Resources

- <http://en.wikipedia.org/wiki/Internet>
- <http://en.wikipedia.org/wiki/Unicode>
- <http://en.wikipedia.org/wiki/UTF-8>
- [http://en.wikipedia.org/wiki/Universal Character Set](http://en.wikipedia.org/wiki/Universal_Character_Set)
- <http://en.wikipedia.org/wiki/HTML>
- <http://en.wikipedia.org/wiki/XHTML>
- <http://en.wikipedia.org/wiki/CSS>
- <http://en.wikipedia.org/wiki/WAI>
- [http://en.wikipedia.org/wiki/Section 508](http://en.wikipedia.org/wiki/Section_508)
- http://www.adobe.com/devnet/flash/articles/deep_linking.html
- [http://en.wikipedia.org/wiki/Representational State Transfer](http://en.wikipedia.org/wiki/Representational_State_Transfer)
- [http://en.wikipedia.org/wiki/Plain Old Semantic HTML](http://en.wikipedia.org/wiki/Plain_Old_Semantic_HTML)
- [http://en.wikipedia.org/wiki/HTML 5](http://en.wikipedia.org/wiki/HTML_5)

thank you

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