

Browsers and Us

Amir E. Aharoni
@aharoni

Pune Language Summit
November 2012

Disclaimer: I am a Mozilla Rep ;)

Web browsers:

What we have

What we need

“Platform”

Web browser
Physical keyboard
Keyboard layout
Font rendering
Font selection
Graphics infrastructure
Operating system

Operating system – fonts

- Which fonts are available by default?
- Does the user need to ask to install them?
 - Very often users don't, even if it's their language, and think that they can only read in English
- More data would be nice – how many people actually install support for their language if it's not enabled by default

Operating system – keyboards

- Which keyboard layouts are available by default?
- They often aren't installed by default, especially if the user didn't acquire a localized OS
- Speakers of some languages dislike built-in keyboard layouts
 - A lot of people in India dislike InScript, for example
 - Many people we met in India go to GMail or Google Translate to use web-based transliteration
 - Or to "English typing computer" shops! :~/

Operating system – discoverability

- How discoverable are the options for installing and enabling fonts and keyboard layouts?
- Often not very much.
- Because of this we offer our web-based keyboard layout (a.k.a Narayam) and webfonts

What we wish

- At least one font for every Unicode script installed by default in all operating systems, and not by request
 - Google's Noto project has a similar goal, but with a different tactic
- Discoverable and usable built-in system keyboard layouts, so that people wouldn't be dependent on websites
 - People want to type offline, too

Accept-Language

Выберите ваш язык

- Вы говорите по-английски, на маратхи, или на хинди?
- We want to guess the user's language:
 - As correctly as possible
 - As early as possible
 - As automatically as possible

Accept-Language

- Identifying the user's preferred language
- Often set automatically in localized OS versions
- Rarely set by users manually^[citation needed]
 - In Catalan-speaking areas in Spain and France, most Windows computers are sold with Spanish or French interface and Accept-Language.
 - There's a campaign in Catalan websites to encourage people to define Catalan as their first Accept-Language, with a website that shows how to do it



No estàs navegant en català

Fes que el teu navegador parli com tu!

Configura't [aquí](#) fàcilment el teu navegador en català

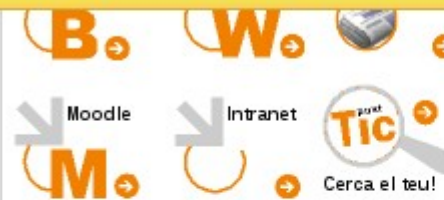
En vols saber més?



Navega en català



Agenda
Formació
Recursos
Xarxa Punt TIC
Les Persones



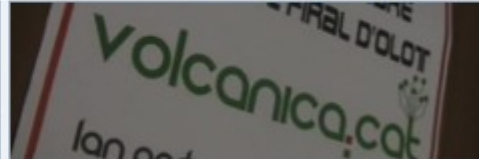
→ A les xarxes socials

- Troba'ns a Facebook
- Segueix-nos a Twitter
- Mira el canal de Youtube



50 places per a dinamitzadors Punt TIC a Form@carm

La plataforma de formació en línia de la comunitat de Múrcia [Form@carm](#)



Així va ser la Volcànica.cat 2012 (vídeo)

Per setè any consecutiu, la [Volcànica.cat](#) es va celebrar a Olot.



- El dinamitzador del Punt TIC Alta Ribagorça felicita a la xarxa pel seu aniversari
- La Fundació Makaia de Colòmbia i l'ús de les TIC per a persones amb discapacitat

Troba un freelance per al teu negoci, avui.

Comença ara, es gratuït

Ability to select any language

- It's not practical to put a list of 7,000 languages in the preferences, so there must be another easy way to add them manually
 - Wikimedia's ULS? :)
- Coordination with the OS' locale
- Firefox: a custom language can be added in `about:config`
- Other browsers?

Proactive setting

- A lofty dream, with a lot privacy problems, but food for thought:
- If a user selects a particular language in many websites, the browser can suggest to put it in Accept-Language

Font preferences

Relics from the 1990s

- In Firefox you can select different fonts for:
 - Western
 - Baltic
 - Central European
 - Southern European
 - Turkish
- *But actually, they are all Latin!*

5 types of Latin, but:

- You can only define one “User defined” font.
- And then it will be applied to all languages.
- (In Chrome you can select a font for one language only. Hmm.)
- Tibetan couldn't be displayed in Firefox before Firefox 4 – the engine supported it, but it wasn't included in the font preferences list, so the browser got confused

User defined?

- A font for the *Arabic script* can be configured, but usually the fonts for the *Arabic language* don't support Urdu well.
 - And vice-versa: Define a good Urdu font for the *Arabic script*, and the *Arabic language* will be broken
- Firefox seems to do some magic with the *Korean language* without asking the user.
 - So the font engine is somehow aware of language

So, what do we need?

- An ability to select a font for each script in ISO 15924.
 - Around 100 scripts – should be manageable
- More importantly: sane defaults, adapted to the operating system.
 - Mangal for Windows, Lohit for Linux etc.
 - Defaults are important because people don't like to select fonts.

So, what do we need?, cont.

- Ability to further customize per language
 - Urdu, Vietnamese etc. But it requires thought.
- Suggest downloading a good font if that OS is known to have bad fonts by default
 - Discussed further.

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RTL

*a.k.a. right-to-left,
bidirectional,
bidi*

אֲנִי כָּל-כֶּף אוֹהֵב לְדַבֵּר עַל זֶה!

The situation is actually good :)

- HTML is probably the document format with the best RTL support features.
 - In comparison to Microsoft Office and LibreOffice, for example (for displaying, not for writing)
- Using `dir="ltr"` correctly does almost everything
- And it has been supported in all browsers for a long time

HTML5 rocks!

- HTML5 is even better.
 - Isolation – helps Urdu and English not to jump one over the other (<bdi>)
 - (Rudimentary) auto-detection (dir="auto")
- Support is not yet complete anywhere
- Steady progress in Firefox and Webkit
- No progress in IE and Opera :(

HTML standard wishlist

- *[Anyone with connections in W3C? :)]*
- Assign direction according to language
 - Now we have to do it ourselves, both server-side (PHP) and client-side (JavaScript)
 - We got quite good at it, but many more websites need it, so the browser should do it
- BiDi-isolate elements with a different language
- Smarter auto-detection (now – only by first letter)

HTML standard wishlist, cont.

- We have `lang` and we have `dir`...
- But we wish we could also have something like `script`:
 - `ਲੁਧਿਆਣਾ`
 - `لودهيانا`
- "pa-guru" / "pa-arab" kinda work, but have issues
 - (Of course, the attribute can have a different name, because "script" can be confusing.)

contentEditable|

Visual Editor FTW!

- contentEditable is becoming very important for Wikimedia because of the Visual Editor
- The most important upcoming MediaWiki feature
- The current specification and implementations of contentEditable are loose
- Let's work together on understanding the requirements!

Weird feature example

- Safari!
 - is the only browser that lets the user set the direction (RTL/LTR) of a contentEditable element ...
 - ... even of a word inside a paragraph ...
 - ... but it's not quite clear what does it actually do with it :(

Font rendering libraries

Harfbuzz and Graphite

- Both Firefox and Chrome seem to use some version of Harfbuzz for some languages
- Can y'all please use it consistently everywhere?
- Graphite is needed for some writing systems
 - Can be enabled manually in Firefox
 - Not available in Chrome (last time I checked)

SVG

- Is the same font rendering library used for HTML and SVG?
- If not, why?
- If nobody knows why, can it be unified, please? :)

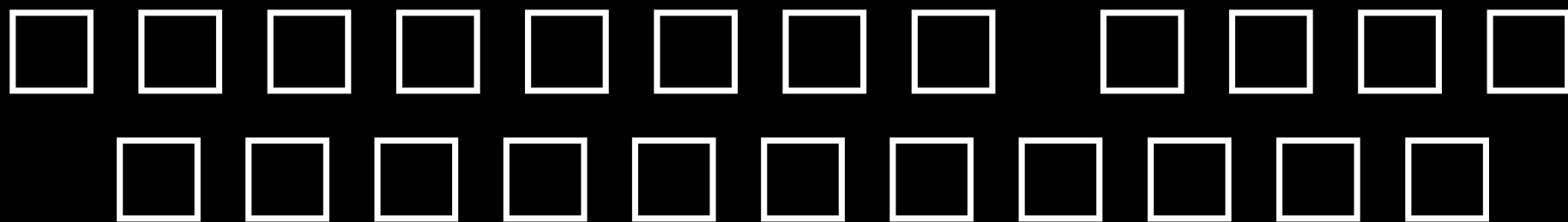
Vertical text

Chinese and Japanese

- It's not really required, but *newspapers* and books use it very frequently
- It would make over a billion people happy
- Requirements are similar to Mongolian

Mongolian

- This language needs it always, unlike Chinese and Japanese
- Millions of Mongolian speakers in China, and in Mongolia, need it
- Works quite well in IE and Webkit, but has some bugs in font rendering
- Firefox – not yet, but hopefully on the way



Automatic font installation

Opera Mini

- Renders the site as a graphic server-side
 - Doesn't work for all languages, but works for some key languages of India
- Sends the client an image
- Wastes bandwidth, but makes text readable

Firefox for Android

- Has a plan and even some code for automatic downloading, but not landed yet
- Firefox OS is an opportunity – just ship with all possible fonts, please... :)
- The same for Android. Come on, Google :)
- iOS doesn't seem to care :(

Fedora with GNOME

- Funny situation:
 - The browser will silently show squares if the site *content* has characters and a font is not installed
 - Gtk will suggest to download the needed packages if the characters appear in the *window title*, because then it's in the window manager territory
- Shows the disadvantage of autonomous font rendering in the browser
- Automatic downloading doesn't seem to happen at all in Ubuntu :(

Desktop browsers in general

- What we would love to see...
 - Detect that a user needs a font as early as possible:
 - browser installation wizard!
 - site content
 - site title
 - Download a font from a repository
 - Profit!

Keyboard

AltGr

- AltGr (right Alt) is needed for some keyboard layouts
- Firefox supports AltGr in keyboard events
- Other browsers don't seem to support it :(

Characters vs. physical keys

- Our input method libraries (Narayam and jquery.ime) respond to character events, rather than actual keys, because it seems browsers only support characters
 - The French keyboard is AZERTY and not QWERTY
 - The Russian has entirely different letters
- This means that our layouts depend on a particular system keyboard layout
 - Usually English (US), but sometimes others, depending on what the majority of the target audience uses

Mobile layouts

- It should be really easy to create smart mobile keyboard layouts
- I tried looking for the keyboard layouts directory in the Android source tree and it was very hard – the tree is too huge
- Leverage the open source i18n community – make contributing layouts easier
- (The same goes for Firefox OS)

Не слишком загрузил?

:)

Information overload?

Preguntes?

@aharoni