HTML5

SET09103 Advanced Web Technologies

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HTML: history

- “HTML tags”, Berners-Lee, first mentioned in 1991
- HTML 2, 1995 - 1997 (basic tags, forms, tables, image maps)
- HTML 3, 1995 - 1997 (browser-specific tags, browser wars)
- HTML 4, 1997 - 2000 (stylesheets instead of visual markup)
- XHTML 1, 2000 - 2001 (XML precision)
- HTML 5 and XHTML 5, 2008 -
HTML5: Deprecated features

- font, center, dir, big (to be replaced by stylesheets)
- presentational attributes: align, etc (to be replaced by stylesheets)
- frame, frameset (replaced by iframe, PHP/Ajax ?)
- applet (replaced by object)
HTML5: New features

- new elements: audio, video, canvas, figure
- new form controls: date, time, url, email, search
- structuring: article, section, footer, details, summary, nav
- web storage
- DOM scripting
HTML5: New APIs

- geolocation
- playing audio and video
- offline web applications
- drag and drop
- history (reading the history, control of the back button)
Example: article tag in Safari Reader

Example: collaborative drawing (IE9)

Web Storage and DOM Storage

- persistent, client-side storage
- modern version of “cookies”
- client-side scripting (Javascript)
- local and session storage (per-page-per-window)
- associative array, hash
Web SQL Database

Similar to Web Storage, but uses an SQL database (SQLite).

Accessed via Javascript.

At the moment: not supported by all browsers.

How much control does the user have? (e.g. turn off database storage, determine size)
SQLite

```sql
:)sqlite3 search.sqlite
SQLite version 3.6.22
Enter " .help" for instructions
sqlite> .tables
engine_data
sqlite> select * from engine_data;
8|[profile]/sourceforge.xml|order|8
10|[app]/google.xml|order|1
11|[app]/yahoo.xml|order|2
12|[app]/amazondotcom.xml|order|3
13|[app]/answers.xml|order|4
14|[app]/creativecommons.xml|order|5
15|[app]/eBay.xml|order|6
16|[app]/wikipedia.xml|order|7
17|[app]/google.xml|used|0
sqlite> .quit
```
Firefox: Indexed Database API

SQLite used for cookies, downloads, permissions, search, etc

JSON used for bookmarkbackups, search, etc

RDF used for localstore
Kamkar: “Evercookie”

Creating a cookie that cannot be deleted.

Using flash cookies, Silverlight cookies, and three different types of HTML5 storage.
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Using flash cookies, Silverlight cookies, and three different types of HTML5 storage.

To delete this cookie in Safari:

Reset, restart + script to delete from folders, in the databases and in LocalStorage.

In iPhone this requires a jailbreak.
New commercial uses: DoubleClick++

RLDGUID: Ring Leader Digital Globally Unique ID

- made by a mobile advertising company
- globally unique ID!
- this ID cannot (easily) be deleted
- opt out is possibly but cannot be verified

If one of RLDG’s customers knows your name
⇒ all participating websites know
who you are when you visit their site!
From the user’s viewpoint

- More functionality (Web 2.0)
- More transparency needed
  for example: “private mode browsing” and LocalStorage?
- Browser extensions may give users more control