

Entwicklung in Open Source Projekten WS 09/10

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1. Mozilla Project
2. Technologies
 - XPCOM
 - XUL
3. Bug 340432
4. Bug 505109

- 1998 Freigabe des Quelltext der Netscape Browser Suite
- Netscape gründet Mozilla Organisation
- Theoretisch unabhängig, aber mit Netscape Mitarbeitern besetzt
- Entwicklung im Open Source Ansatz vorantreiben
- 2000 Release von Mozilla 1.0

Mozilla Foundation

- 2003 Einigung zwischen AOL und Microsoft
- Schließung der Netscape Browser Entwicklungsabteilung
- Gründung Mozilla Foundation
- Non-Profit-Organisation
- Hält Rechte am Mozilla Code, Marken Mozilla und Bugzilla

Mozilla Corporation

- Gründung 2005
- 100%-Tochtergesellschaft der Foundation
- For-Profit –Organisation
- Verantwortlich für Entwicklung, Vermarktung

Headquarters

- Sitz in Mountain View, Kalifornien



- Geldspenden
- Verträge mit Suchmaschinenanbietern

Jahr	Einnahmen	Ausgaben
2006	66,8 (61,5) Mill. \$	19,8 Mill \$
2007	75 Mill. \$	33 Mill. \$

Mozilla Applications



Bugzilla



Camino



Fennec



Firefox



Lightning and Sunbird



SeaMonkey

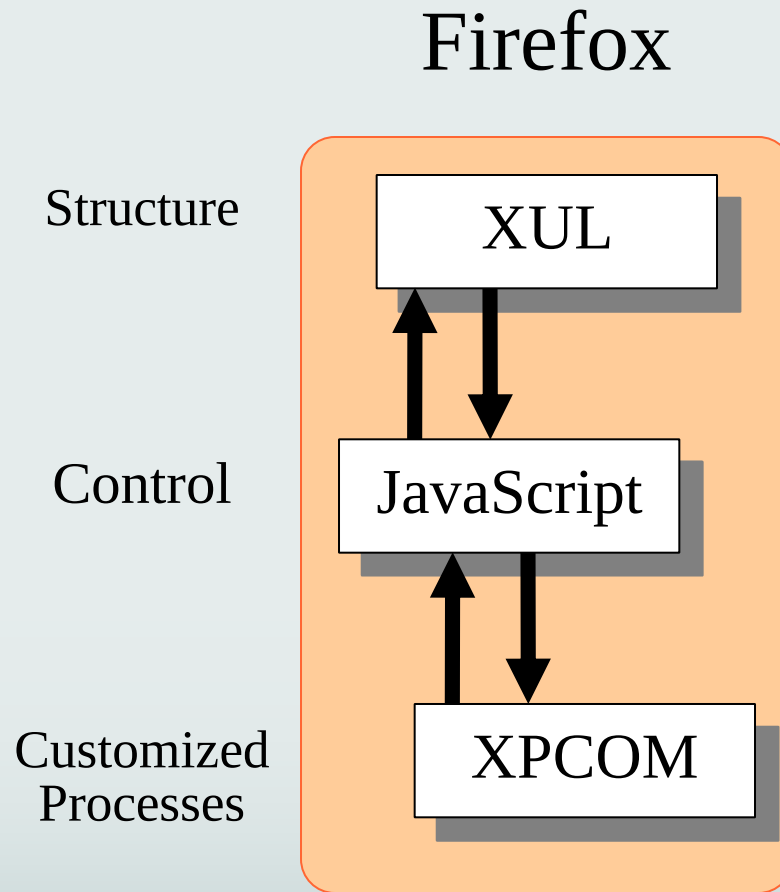


Thunderbird

Core Mozilla Architecture

- Mozilla beinhaltet folgende Technologien:
 - XPCOM – Cross Platform Component Object Model
 - XPConnect – Zugriff auf XPCOM Komponenten (JavaScript)
 - XPIDL – Cross Platform Interface Description Language
 - XBL – Extensible Binding Language
 - XUL – XML User Interface Language
 - XPInstall – Cross Platform Installations
 - NSPR – Cross Platform Operating System Facilities

Interaktion der Komponenten



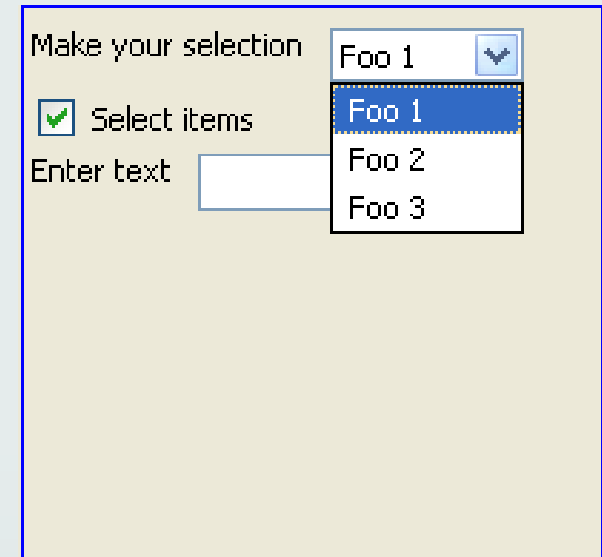
XUL (pronounced "zool")

- Mozilla's XML-based User Interface Language
- Plattformunabhängige Sprache zur Beschreibung von Benutzeroberflächen
- Viele der Mozilla Applikationen sind in XUL geschrieben
 - Browser – Sammlung von XUL Buttons, Frames und Menus
 - Adressbuch
 - DOM Inspector
- "There is no data, there is only XUL"



XUL Beispiel

```
<vbox>
<hbox>
  <label value="Make your selection"/>
  <menulist>
    <menupopup>
      <menuitem label="Foo 1" selected="true"/>
      <menuitem label="Foo 2"/>
      <menuitem label="Foo 3"/>
    </menupopup>
  </menulist>
</hbox>
<checkbox label="Select items" checked="true"/>
<hbox>
  <label value="Enter text"/>
  <textbox size="15"/>
</hbox>
</vbox>
```



•DEMO : XUL Oberfläche <http://www.hevanet.com/acorbin/xul/top.xul>

XUL – Supporting Technologies

Trennung von Applikations- und Programmierlogik,
Darstellung und Lokalisierung

- Layout – XUL und JavaScript
- Skin - CSS
- Lokalisierung – DTDs und .properties Dateien

XPCOM & XPConnect (1/2)

- XPCOM

“A simple, cross-platform component model with multiple language bindings and IDL descriptions so you can plug your custom functionality into the framework and connect it with other components.” (<https://developer.mozilla.org>)

- XPConnect

“XPConnect is a bridge between JavaScript and XPCOM. With XPConnect, you can use XPCOM components from JavaScript code, and interact with JavaScript objects from within XPCOM components. ” (<https://developer.mozilla.org>)

XPCOM & XPConnect (2/2)

- Javascript-Zugriff auf Objekte in XPCOM
 - Komponente holen
 - Interface holen
 - benötigte Funktion aufrufen
- Beispiel: Service für Abwicklung von lokalen Dateien aufrufen

```
var aFile =  
Components.classes["@mozilla.org/file/local;1"].createInstance();  
  
if (aFile)  
aFile.QueryInterface(Components.interfaces.nsILocalFile);
```

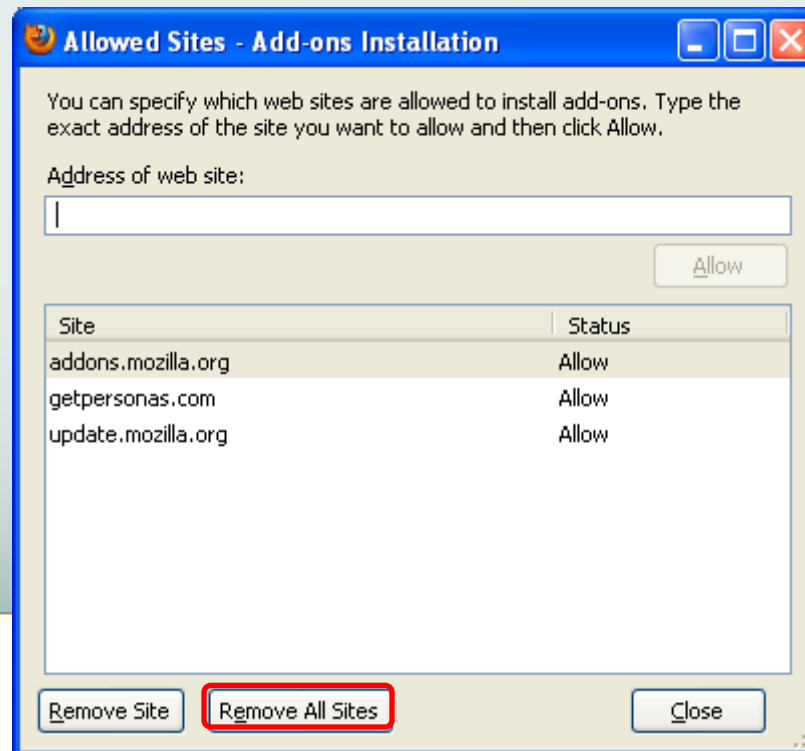
Bugs



Bugzilla

Allowed Sites – Add-ons

- Zugehörige .xul Datei – mit *ChromeList* Add-on finden:
/browser/content/preferences/permissions.xul
- Problem: “Remove All Sites” löscht alle Seiten ohne Sicherheitsabfrage



Erste Schritte (1/2)

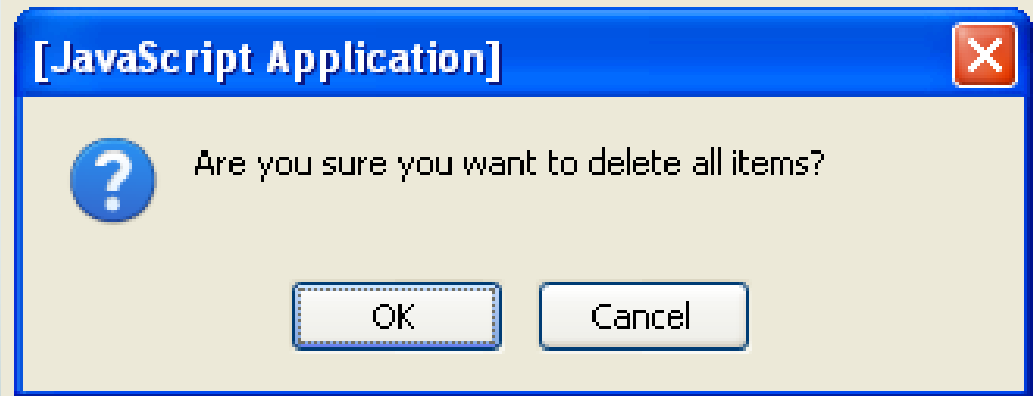
```
<button id="removeAllPermissions"
  icon="clear" label="&removeallpermissions.label;"
  accesskey="&removeallpermissions.accesskey;"
  oncommand="deleteCurrent()" />

<script type="application/x-javascript">
  <![CDATA[
    function deleteCurrent() {
      var x=window.confirm("Are you sure you want to
                           delete all items?")

      if (x)
        gPermissionManager.onAllPermissionsDeleted()
    }
  ]]>
</script>
```

Erste Schritte (2/2)

- `x=window.confirm(param)` nimmt nur ein Parameter
- Definition von Titel ist nicht möglich
 - [JavaScript Application] - Standarttitel
- `window.confirm/alert` - nicht gedacht für die GUI



Zweiter Ansatz(1/3)

- Neues Dialog-Fenster bauen
 - `confirmation.xul` – Struktur definieren
 - `confirmation.js` – Funktionalität definieren
 - Aufruf von *confirmation*-Dialog bei Klick auf “Remove All Sites”

Zweiter Ansatz(2/3)

```
<?xml version="1.0"?>
<?xml-stylesheet href="chrome://global/skin/global.css"
type="text/css"?>
<dialog id="confimDeleteAll" title="Confirm"

xmlns="http://www.mozilla.org/keymaster/gatekeeper/there.is.
only.xul"
  buttons="accept,cancel"
  buttonlabelcancel="Cancel"
  buttonlabelaccept="Yes"
  ondialogaccept="return onYes();">

<caption label="Are you sure you want to delete all
items?"/>
...
<script type="application/javascript"
src="chrome://browser/content/preferences/confirmation.js"/>
</dialog>
```

/browser/content/preferences/confirmation.xul

Zweiter Ansatz (3/3)

/browser/content/preferences/confirmation.js :

```
...  
function onYes() {  
  gPermissionManager.onAllPermissionsDeleted();  
}  
...
```

- Bei Klick auf “Remove All Sites” in permission.xul:

```
window.openDialog("chrome://browser/content/preferences/confirmation.xul", "confirmDeleteAll",  
"chrome, resizable=yes, minimizable=no", 6.98)
```

- confirmation.js und confirmation.xul müssen in chrome-Ordner registriert werden damit Aufruf über URL funkt.

Entwicklerforum und Chat

 7086 users online. lag: 546ms
IRC: 1 connection

Login | Create an account | Password reminder

Home Mozilla #firefox (164) AaronCampbell firebot

Firefox community & support channel

Permission isn't needed to ask your question. If no one's around say "help!"

18:15 victor notice the title bar

18:15 supernova_00 victor: yeah

18:15 victor it says JavaScript Application

18:15 victor I can leave it like that but it is ugly

18:16 Cork[home] victor: i think its cause windows.confirm/alert isn't mean to be used by the gui

18:16 victor yes

18:16 victor can you tell me an alternative?

18:16 Cork[home] if you check what the password manager uses, its completly different

18:16 Cork[home] i posted a link to it a few lines ago

18:17 victor i tried using: `window.openDialog("chrome://browser/content/preferences/confirmation.xul", "confirmDe`

18:17 *** SWAT quit (Quit: leaving)

18:17 supernova_00 victor: eh, you can't rename the title with `window.confirm` either

18:17 victor i have defined the `confirmation.xul` and `confirmation.js`

18:18 victor i'll show pastebin link

18:18 Cork[home] <http://mxr.mozilla.org/mozilla-central/source/toolkit/components/passwordmgr/content/passwordMana>

18:18 Cork[home] `Components.classes["@mozilla.org/embedcomp/prompt-service;1"].getService(Components.interfaces`

Richtiger Ansatz (1/3)

...

```
<button id="removeAllPermissions" icon="clear"
        label="&removeallpermissions.label;"
        accesskey="&removeallpermissions.accesskey;"
        oncommand="gPermissionManager.deleteAllSites()" />
```

...

Richtiger Ansatz (2/3)

```
deleteAllSites: function() {  
  
    var brandBundle =  
    Components.classes[ "@mozilla.org/intl/stringbundle;1" ]  
    .getService( Components.interfaces.nsIStringBundleService )  
    .createBundle("chrome://browser/locale/preferences/preferences.prop  
erties");  
  
    var remPermTitle =  
    brandBundle.GetStringFromName("removeAllPermissionsTitle");  
  
    var remPermPrompt =  
    brandBundle.GetStringFromName("removeAllPermissionsPrompt");  
  
    var prompts = Components.classes["@mozilla.org/embedcomp/prompt-  
service;1"].getService(Components.interfaces.nsIPromptService);  
  
    var result = prompts.confirm(null, remPermTitle, remPermPrompt);  
    if (result) gPermissionManager.onAllPermissionsDeleted(); }  
}
```

Richtiger Ansatz (3/3)

- Unterstützung von Lokalisierung mittels .properties Dateien für die verschiedenen Sprachen
- Bei Installation werden nur Lokalisierungsdateien für die ausgewählte Sprache kopiert

preferences.properties:

...

```
removeAllPermissionsTitle=Confirm
```

```
removeAllPermissionsPrompt=Are you sure you wish to delete all  
allowed web sites?
```

...

- Analog für `passwordsManagerException.xul/.js` und `passwordmgr.properties`
- DEMO

Patching & Reviewing

- Mercurial : *diff*- Datei erstellen

- `hg diff -p -U 8 mozilla/<restOfPath>/ > OUT_FILE`

- Patch erstellt
- Patch in Bugzilla eingereicht
- Reviewer: Mike Connor
- Response:

*I don't think adding a confirmation dialog is the right approach here...
... but the right answer, IMO, is to make the prefwindow not be instant
apply, and perform the actions on clicking OK (which, ideally, would be
changed to "Apply Changes"). (Mike Connor)*

Bug 505109

Bugzilla@Mozilla – Bug 505109

Import Wizard does not include an option to import .json files

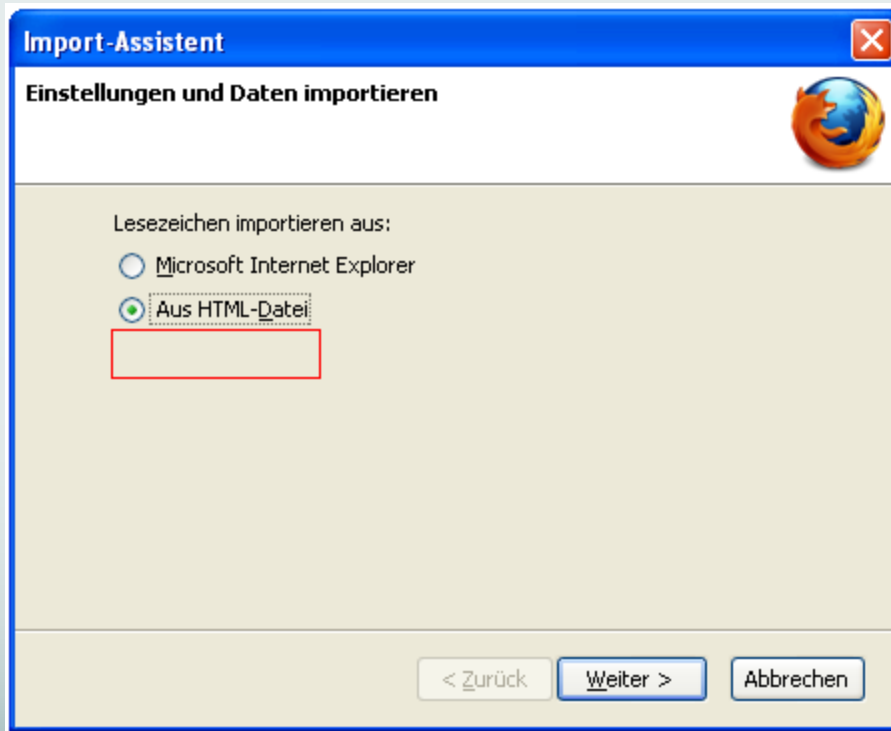
[Home](#) | [New](#) | [Search](#) | | [Reports](#) | [Requests](#) | [Help](#) | [New Account](#) | [Log In](#) | [Forgot Password](#)

[First](#) [Last](#) [Prev](#) [Next](#) No search results available

[Bug 505109](#) - Import Wizard does not include an option to import .json files

Status:	NEW	Reported:	2009-07-19
Whiteboard:	[good first bug]	Modified:	2010-01-21
Keywords:	student-project	CC List:	6 users (show)
Product:	Firefox	See Also:	
Component:	Migration	blocking1.9.3:	---
Version:	Trunk	status1.9.3:	---
Platform:	All All	blocking1.9.2:	---
Importance:	P3 enhancement (vote)	status1.9.2:	---
Target Milestone:	Future	blocking1.9.1:	---
Assigned To:	Dennis	status1.9.1:	---
QA Contact:	migration		

- Bookmark Import Wizard
- Eintrag zum Import von .json Dateien fehlt



Erste Schritte (1/2)

- Finden des Import Wizards
migration.xul, migration.js
- Lokalisierung in migration.dtd

Erste Schritte (2/2)

- Den Aufrufer des Import Wizards finden
- places.js

Radiobutton in migration.xul

```
<radio id="fromfile"  
      label="&importFromHTMLFile.label;"  
      accesskey="&importFromHTMLFile.accesskey;"  
      hidden="true"/>
```

Neuer Radiobutton in migration.xul

```
<radio id="fromjsonfile"  
      label="&importFromJSONFile.label;"  
      accesskey="&importFromJSONFile.accesskey;"  
      hidden="true"/>
```

Lokalisierung in migration.dtd

```
<!ENTITY importFromJSONFile.label      "From an JSON File">  
<!ENTITY importFromJSONFile.accesskey  "J">
```

Initialisierung in migration.js

```
onImportSourcePageShow: function ()
{
    // Reference to the "From File" radio button
    var fromfile = null;

    if ("arguments" in window && window.arguments[0] == "bookmarks")
    {
        this._bookmarks = true;
        fromfile = document.getElementById("fromfile");
        fromfile.hidden = false;
        var importBookmarks = document.getElementById("importBookmarks");
        importBookmarks.hidden = false;
        var importAll = document.getElementById("importAll");
        importAll.hidden = true;
    }
    ...
}
```

Änderung in migration.js (1/2)

```
onImportSourcePageShow: function ()
{
    // References to the "From File" and "From JSON File" radio buttons
    var fromfile = null;
    var fromjsonfile = null;

    if ("arguments" in window && window.arguments[0] == "bookmarks")
    {
        this._bookmarks = true;
        fromfile = document.getElementById("fromfile");
        fromfile.hidden = false;
        fromjsonfile = document.getElementById("fromjsonfile");
        fromjsonfile.hidden = false;

        var importBookmarks = document.getElementById("importBookmarks");
        importBookmarks.hidden = false;
        var importAll = document.getElementById("importAll");
        importAll.hidden = true;
    }
}
```

...

Benutzereingabe in migration.js

```
onImportSourcePageAdvanced: function ()
{
    var newSource =
document.getElementById("importSourceGroup").selectedItem.id;

    if (newSource == "nothing" || newSource == "fromfile")
    {
        if(newSource == "fromfile")
            window.opener.fromFile = true;
        document.documentElement.cancel();
        return false;
    }
    ...
}
```

Änderung in migration.js (2/2)

```
onImportSourcePageAdvanced: function ()
{
    var newSource =
document.getElementById("importSourceGroup").selectedItem.id;

    if (newSource == "nothing" || newSource == "fromfile" ||
newSource == "fromjsonfile")
    {
        if(newSource == "fromfile")
            window.opener.fromFile = true;
        if(newSource == "fromjsonfile")
            window.opener.fromJsonFile = true;
        document.documentElement.cancel();
        return false;
    }
}
```

...

Import Wizard Aufruf in places.js

```
importBookmarks: function PO_import() {  
    var features = "modal,centerscreen,chrome,resizable=no";  
    // The migrator window will set this to true when it closes,  
    // if the user chose to migrate from a specific file.  
    window.fromFile = false;  
  
    openDialog("chrome://browser/content/migration/migration.xul",  
              "migration", features, "bookmarks");  
    if (window.fromFile)  
        this.importFromFile();  
},
```

Änderung in places.js

```
importBookmarks: function PO_import() {
    var features = "modal,centerscreen,chrome,resizable=no";
    // The migrator window will set this to true when it closes,
    // if the user chose to migrate from a specific file.
    window.fromFile = false;
    window.fromJsonFile = false;

    openDialog("chrome://browser/content/migration/migration.xul",
               "migration", features, "bookmarks");
    if (window.fromFile)
        this.importFromFile();
    if (window.fromJsonFile)
        this.onRestoreBookmarksFromFile();
},
```