

Firefox OS Asynchronized Request

In Firefox OS, app is treated as web page. Web apps need to access device hardware (such as battery status or the device vibration hardware), as well as access to data stored on the device (such as the calendar or contacts list). This is achieved via WebAPI.

Most WebAPIs need to send asynchronized request to access device resource. We use contacts API as an example. When app sends request to get contact from contacts list, it calls contacts API and registers onSuccess and onError callback handlers which are the callback functions to handle response of the API call.

Contacts API will generate a random ID for the request and store request in array. Then sends get-contact request to system and return DOMRequest object. DOMRequest object will contain the search result from contacts list after receiving response of contacts API as well as reference to the operation's result. Additionally, in order to identify which frame sends the request, DOMRequest includes DOMWindow which is created for each frame.

After receiving the response, Firefox OS will use ID to retrieve the DOMRequest Object which send get-contact request from array. Callee can get the operation result only if the reference of DOMRequest still come from same domain.