

Zimbra

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Meeting minutes of WebBluetooth API discussion (March 15)

From : Jamin Liu <jaLiu@mozilla.com> Tue, Mar 18, 2014 03:22 PM
Subject : Meeting minutes of WebBluetooth API discussion (March 15)  1 attachment

To : Ben Tian <btian@mozilla.com>, Eric Chou <echou@mozilla.com>, Shawn Huang <shuang@mozilla.com>, Arthur Chen <achen@mozilla.com>, Ian Liu <iliu@mozilla.com>, Evelyn Hung <ehung@mozilla.com>, Gene Lian <clian@mozilla.com>, Gina Yeh <gyeh@mozilla.com>, Jocelyn Liu <joliu@mozilla.com>, Alive Kuo <akuo@mozilla.com>, jaLiu@mozilla.com

Hi all,

Here is the meeting minutes of our WebBluetooth API discussion.
Thank you for your attendance last Friday.

There are three notations I used in this mail, in case you don't have time to read the entire meeting note, just search the notations.

- *(Remain Unchanged)*
- *(Under Discussion)*
- **Action Item:**

Please feel free to add more items if you want.
(I am sorry for being late to send the meeting minutes. >"<)

===== Bluetooth Manager =====

1) Since we may have more than one adapter, does it means we have separate switch for each adapters ? (Evelyn)

→ Yes *(Remain Unchanged)*

2) Why we return a BT address in [onadapterremoved](#) but return a adapter in [onadapteradded](#) ? (Arthur)

Proposal 1 :

Should we return BT address for both APIs for consistency ? (Arthur)

[onadapteradded](#) ([BluetoothAdapterEvent](#) aAdapter) --> [onadapteradded](#)

([BluetoothAddressEvent](#) aAddress)
[onadapterremoved](#) ([BluetoothAddressEvent](#) aAddress)

P.S. We have to provide a new API for user to obtain Bluetooth device in this proposal.

e.g. `var adapter = manager.getBluetoothAdapter(adapter);`

Proposal 2 :

Could we return BT device in [onadapterremoved](#) ? (Gene)
[onadapteradded](#) ([BluetoothAdapterEvent](#) aAdapter)
[onadapterremoved](#) ([BluetoothAddressEvent](#) aAddress) -->
[onadapterremoved](#) ([BluetoothAdapterEvent](#) aAdapter)

The adapter was removed when [onadapterremoved](#) is fired, there should be no adapter instance in B2G. (Ben)

Could we remain adapter instance for a while after it was removed ? (Gene)

We may need the info. of removed adapter, e.g. UX requirement. (Gene)

→ It seems like we prefer proposal 2. (*Under Discussion*)

Action Item: BT team will write a experimental interface for next discussion.

4) Should we provide a way to tell user whether the default adapter was removed. (Arthur)

Reason: Gaia devs think Gecko should provide this info, otherwise, API users have to do some extra works in Gaia side.

e.g. (a) Call `getDefaultAdapter` and bind the handler again when adapter was removed.

(b) Compare the BT address to trace the state of default adapter in Gaia side.

→ **Action Item:** BT team will modify `manager.onadapterremoved` to indicate whether the default adapter was changed.

5) How about we design one unified API to replace [BluetoothManager.onadapteradded](#) and [BluetoothManager.onadapterremoved](#) ? (Gene)

e.g. `BluetoothManager.onadapterstatechanged`

→ (*Under Discussion*)

6) How to get adapter ? "readonly attribute" or "function call" ?

Proposal 1 :

any [getAdapters\(\)](#); // array of `BluetoothAdapter`

BluetoothAdapter [getDefaultAdapter\(\)](#);

(P.S. They would be synchronize calls in this API draft.)

Proposal 2 :

readonly attribute any adapters; // array of BluetoothAdapter

→ It seems like we prefer proposal 1 ? (*Under Discussion*)

7) Let us skip the discussion of getAdapters(), we don't have multiple adapters in current products. (Eric)

→ *Skip ..*

8) There is a plan for B2G to replace 'DOM request' by 'Promise' in future. (Gene)

→ We think it wouldn't affect the BT API discussion. (*Remain Unchanged*)

=====**Bluetooth Adapter**=====

9) Why we hide the device found event into DOMRequest of startDiscovery ?

(Evelyn)

(i. e. Only the caller of adapter.startDiscovery() could listen the event handler.)

→ Three reasons (*Remain Unchanged*)

1. It provides better permission control (Gene)

2. If other API user could listen devicefound() event, they could miss event or get duplicate device. (Jamin)

Because it's hard for they to aware the begin and end of startDiscovery procedure.

3. It provides better

causality and connection between startDiscovery() and devicefound() (Gina)

10) How about we provide a full list of device in devicefound event ? (Gene)

→ (*Under Discussion*)

11) Should we put 'discovering' and 'discoverable' into [BluetoothAdapterState](#) ?

(Gene)

→ (*Under Discussion*)

Action Item: BT team would discuss about it and provide a experimental interface if it's needed.

12) Can we still receive adapter event when it disabled ?

→ Yes (*Remain Unchanged*)

13) Should we rebind handlers for adapter after it's been disabled ? (Evelyn)

Could we use the same instance or should we getDefaultAdapter() again ?

→ It should be OK? (*Under Discussion*)

Action Item: BT team will investigate it.

14) When adapter was disabled, does it make sense to set all attributes to the default value? (Shawn.H)

→ Since Shawn and I only talked about this one in whispers, we didn't raise this topic in meeting room. (*Under Discussion*)

15) When the adapter state is 'enable', does it mean we could get a correct address at that time? (Arthur)

Same question, when the state is 'enabling', ... ?

→ You hit the point, we should define it. (Eric) (*Under Discussion*)

Action Item: BT team would define it and discuss in next meeting.

16) Is it really a good idea to listen 5 attributes through [BluetoothAdapter.onattributechanged](#) ? (Gene)

→ (*Under Discussion*)

17) Could one adapter pair to multiple devices in the same time? (Evelyn)

→ Yes, from the API view. (*Remain Unchanged ?*)

However, there are many implementation details involved.

18) Should it be 'BluetoothAdapter.setName' or 'readonly attribute name' ?

→ Use DOMRequest since it's an asynchronous call. (*Remain Unchanged*)

In addition, DOMRequest has better ability of error handling (webidl exception using are rare in our codebase)

19) Should 'discovering' be an attribute of adapter ? The discovering state seems only related to startDiscovery() caller. (Evelyn)

→ Yes (*Remain Unchanged*)

For those gentle developers which want to call startDiscovery(), they may want to know whether adapter is discovering and try to avoid to interrupt it.

Thus, we expose the discovering as an attribute of adapter. If developers want to be polite, they could check it before startDiscovery()

20) If we put devicefound listener into req of startDiscover(), we have to hold that req object in some place for unregister purpose. (Evelyn)

→ (*Under Discussion*)

Action Item: BT team will investigate it and try to provide a better solution.

21) When does DOM req end? When the onsuccess is fired or when it exits its live cycle? (Eric)

→ (*Under Discussion*)

Action Item: BT team will investigate it.

Could Gaia team also help on this ?

22) If only the caller of `startDiscovery()` can listen `devicefound`, does it makes sense to allow everyone to call `stopDiscovery` ? (Evelyn)

→ It seems OK. *(Remain Unchanged)*

- I think it's okay to interrupt other user, since discovery procedure takes a lot of time to complete. There is no reason to ask user to wait for other discovery complete when we can't expect the waiting time. (Jamin)

- The API user could just disable and re-enable adapter again to stop the discovery anyway. (Eric)

23) When `app_A` is pairing, should `app_B` know that ? (Arthur)

→ Eric prefer to remain unchanged. *(Remain Unchanged ?)*

- It's dangerous to expose the the pair relative event and may cause few critical bugs. (Eric)

- Could we restrict it to one certified app (e.g. system app) ?

- However, it's under discussion.

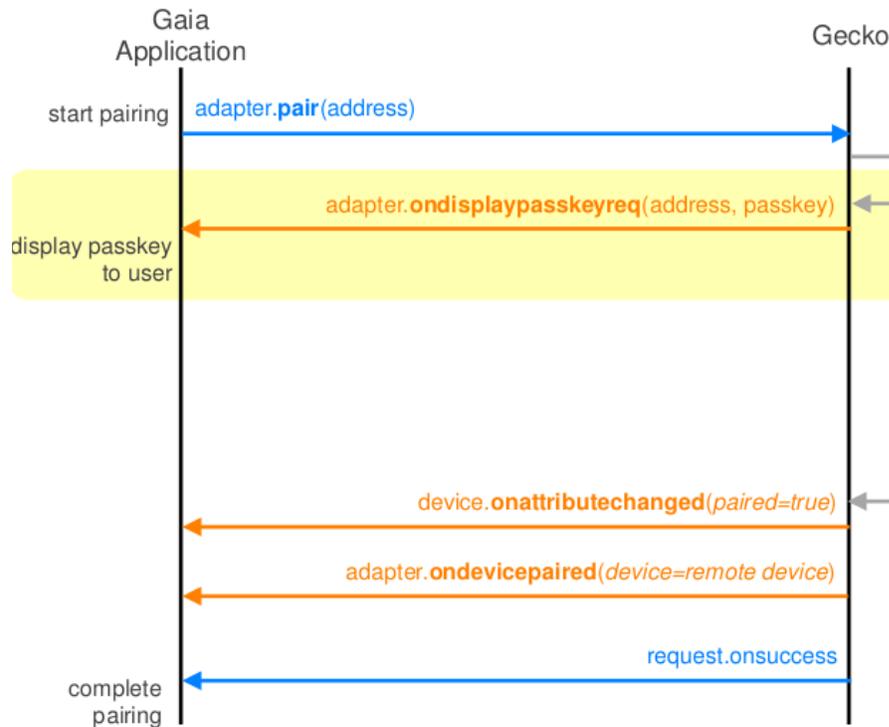
24) If we use OOB paring (e.g. NFC), the only way to get device is from '`adapter.ondiscoverdevicepaired`'. (Evelyn)

Since the paired event would be fired before we get device, we have no chance to listen to that event with OOB parring.

Should we change the order between '`adapter.ondiscoverdevicepaired`' and '`device.onattributechanged`' ?

→ `device.onattributechanged()` is not a step of pairing procedure. *(Remain Unchanged)*

It seems OK to lost that event if you don't have the device.)



25) Should we put `setPassKey()` to `BluetoothDevice` rather than `BluetoothAdapter`? (Evelyn)

→ *(Remain Unchanged ?)*

- It would be a little strange since the action is triggered by adapter. However, we could change the function name if we decide to put it in adapter. (Jamin)

- It may cause some problems if we have multiple adapters, we still need address of adapter to solve problems. (Eric)

26) We should find a way to avoid to put address as a parameter of `setPassKey`. (Gene)

It's easy to make a mistake for a web developer since the address is just a `DOMString`.

→ **Action Item:** Put a handler to `adapter.onenterpasskeyreq(address)` for `setPassKey`.

27) Skip the discussion about the scenario of multiple pairing at the same time.

→ *Skip .. (Similar to item 7.)*

28) How about we use a unified event handler to handle every pair event (i.e. 'display', 'consent' and 'passkey') ? (Evelyn)

→ It's not a good idea since they have different parameters. (Ben) *(Remain Unchanged ?)*

29) Does adapter need more state, such as 'pairing', 'connecting' and 'connected' ?
(Arthur)

It will be needed by UI display.

→ *(Under Discussion)*

Action Item: BT team will provide a new interface to cover this one.

30) Would the state change when adapter get incoming pair/connect request ?
(Arthur??)

→ *(Under Discussion)*

- It's very hard to aware 'connecting' state when it's a incoming connect request.

(Shawn.H)

- It's possible to aware 'paring' state, however, the timing can't be exactly correct.

(Eric)

When we know there is a incoming pair request, the paring procedure is already started.

Best regards,
Jamin

On 2014年03月07日 15:49, Ben Tian wrote:

The following is a new meeting request:

Subject: WebBluetooth API discussion

Organizer: "Ben Tian" <btian@mozilla.com>

Location: "TPE-5C Santos" <tpe-5c@mozilla.com>

Resources: "TPE-5C Santos" <tpe-5c@mozilla.com>

Time: Thursday, March 13, 2014, 2:00:00 PM - 4:00:00 PM GMT
+08:00 Taipei

echou@mozilla.com; shuang@mozilla.com;

Invitees: jaliu@mozilla.com; achen@mozilla.com; iliu@mozilla.com;
ehung@mozilla.com; clian@mozilla.com; gyeh@mozilla.com

~~*~*~*~*~*~*~*~*

Hi all,

We BT team proposed a WebBluetooth API draft [1] and would like to get valuable feedback from you as gaia developers and WebAPI designer. The draft covers scenarios of BT on/off, device discovery, and pairing. During the meeting we'll go through these scenarios first (~40min) and leave the rest for discussion. Please take a look on the

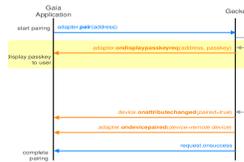
API draft and bring your questions/suggestion for discussion.

[1] <https://wiki.mozilla.org/B2G/Bluetooth/WebBluetooth-v2>

Let us know for any questions. Thanks.
Ben

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BT_pair_slide.png
31 KB