How to declaratively add tactile feedback in WRT widgets

This articles explains how to provide, in a declarative manner, **tactile feedback when click events are performed on specific elements** in a Web Runtime widget.

Description

On touch based devices, tactile feedback allow users to have **direct and immediate response on successful touch interactions**, so **improving the overall user experience**, and **enhancing the usability** of the widget's user interface.

A full introduction to Tactile Feedback is available on Nokia Developer Library: Tactile feedback

The code

This approach works by defining a **global event listener**, that listen to all click events performed within a WRT widget. Once a click event is performed, the **event handler checks if the event target is registered for tactile feedback**, and eventually **performs the required vibration** with the specified intensity.

The declarative syntax

A **custom attribute**, named **feedback**, is used to specify which elements must provide tactile feedback. The **attribute value is used to specify the vibration intensity**, so allowing for finer control of the feedback response.

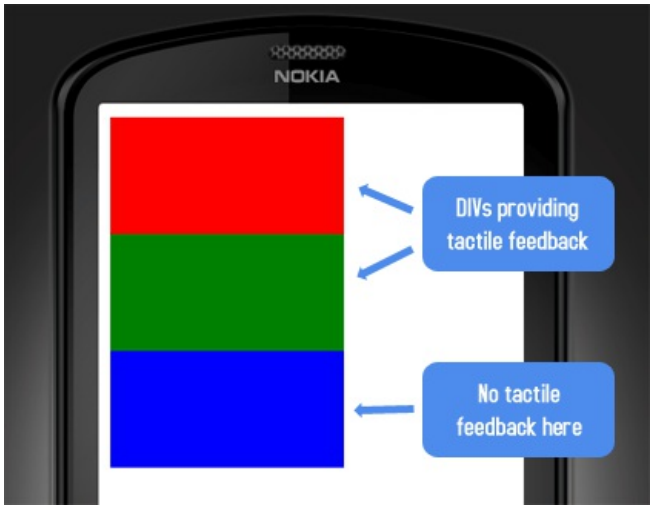
The following HTML code shows **3 DIV elements**: the first 2 are registered for tactile feedback, while the last one is not:

```
<html>
 [...]

 <body onLoad="javascript:init();">
  <div id="element_1" feedback="100" style="width: 200px; height: 100px; background:
red;"></div>

  <div id="element_2"  feedback="50" style="width: 200px; height: 100px; background:
green;"></div>

  <div id="element_3" style="width: 200px; height: 100px; background: blue;"></div>
 </body>
</html>
```



Also, in order to access the device's vibration functionality, the **SystemInfo API plugin is added to the HTML code** of the widget:

```
<embed id="sysinfo" type="application/x-systeminfo-widget" hidden="yes"/>
```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Registering the global click handler

In order to listen to all widget's click events, a **global listener is defined on the document node**. This is done in the init() function, that is called in the widget's onload event:

```
var sysinfo = null;

function init()
{
 sysinfo = document.getElementById("sysinfo");

 document.addEventListener('click', tactileFeedback, false);
}
```

The init() function also **stores a reference to the SystemInfo API plugin in the sysinfo variable**.

Providing the tactile feedback

Each time a click event is performed within the WRT widget, the **tactileFeedback()** function gets called. This function, in order, must do:

- **check if the event target is registered for the tactile feedback**, by checking its feedback attribute
- if the feedback attribute exists, then it **starts a short vibration** with the specified intensity

The code is shown below:

```
function tactileFeedback(event)
{
 var target = event.target;

 var feedback = target.attributes.feedback;

 if(feedback)
 {
  sysinfo.startvibra(50, feedback.nodeValue);
 }
}
```

Downloads

The sample widget shown in this article is available for download here: Media:TactileFeedbackWidget.zip

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