



webshell
v1.0
documentation

Introduction

Currently most hybrid development environments still require the web developer to launch Eclipse or Xcode to write and/or compile their mobile app, package it, and distribute it via the app stores. These development environments have their own significant learning curves, and still require the web developer to learn specific APIs to execute native functions.

The purpose of **webshell** is to circumvent the whole development/packaging effort by creating a custom mobile browser that facilitates native iOS interaction via a suite of native modal controllers common to business. These native modal controllers interface with JSON based RESTful web services provided by the web developer to consume data posted by the device. The native modal controllers also execute JavaScript based callbacks on the originating webpage defined by the web developer. **webshell** achieves this goal using custom div tags containing JSON configuration data to enable one or more native features. Those features include:

- audio recording
- video recording
- signature capture
- barcode/qr code reader
- location services
- location rendering
- upload / download files
- push notification registration
- ...

Configuring the Action Sheet

web-shell-bottom-actions

The web-shell-bottom-actions div controls what actions / native modal controllers are available to the user after the page loads. Here we will dissect the attributes of one action that renders the recordAudio modal native controller:

action	Determines what native modal view controller to load
callback	JavaScript function called on the originating page after the controller has interfaced with the websites RESTful web service. It expects the JSON response data as the single parameter (i.e. <pre>function audioRecorded(json){ //... do something interesting here with the response data. } </pre>
label	text rendered on the action sheet button
url	RESTful web service hosted on the web application to consume the uploaded audio file. (note: if services are secured be sure they target the same domain so the calls inherit the session already provided to your website)
httpMethod	UPLOAD has special meaning to webshell. It will post a file using multipart/form-data (use the recommended httpMethod for each action below)
imageUrl	If the action is rendered in the top right drop down menu, and image can be specified to render next to the label.
properties	Any extra properties supported by this particular action. In the case of recordAudio no extra properties exist currently.

```
<div id="webshell-bottom-actions" style="display: none">
{
{
  "action": "recordAudio",
  "callback": "audioRecorded",
  "label": "Record Audio",
  "url": "https://tekcounsel.net/web.shell.sample/upload",
  "httpMethod": "UPLOAD",
  "imageUrl": null,
  "properties": null
},
{
  "action": "recordSignature",
  "callback": "signatureRecorded",
  "label": "Record Signature",
  "url": "https://tekcounsel.net/web.shell.sample/upload",
  "httpMethod": "UPLOAD",
  "imageUrl": null,
  "properties": null
},
{
  "action": "recordVideo",
  "callback": "videoRecorded",
  "label": "Record Video",
  "url": "https://tekcounsel.net/web.shell.sample/upload",
  "httpMethod": "UPLOAD",
  "imageUrl": null,
  "properties": null
},
{
  "action": "recordPhoto",
  "callback": "photoRecorded",
  "label": "Record Photo",
  "url": "https://tekcounsel.net/web.shell.sample/upload",
  "httpMethod": "UPLOAD",
  "imageUrl": null,
  "properties": {
    "scaleDown": 1.5
  }
},
{
  "action": "recordLocation",
  "callback": "actionsCanceled",

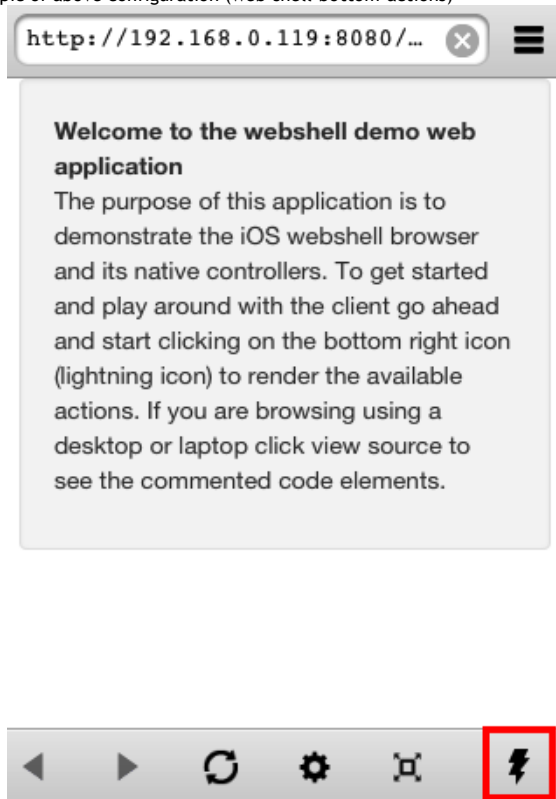
```

```

        "label": "Record Location",
        "url": "https://tekcounsel.net/web.shell.sample/rest",
        "httpMethod": "POST",
        "imageUrl": null,
        "properties": null
    },
    {
        "action": "scanBarcode",
        "callback": "barcodeScanned",
        "label": "Scan Barcode",
        "url": "https://tekcounsel.net/web.shell.sample/rest",
        "httpMethod": "POST",
        "imageUrl": null,
        "properties": {
            "autopost": true
        }
    },
    {
        "action": "renderLocation",
        "callback": "handleLocation",
        "label": "Render Location(s)",
        "url": "https://tekcounsel.net/web.shell.sample/locationdata",
        "httpMethod": "GET",
        "imageUrl": null,
        "properties": null
    },
    {
        "action": "uploadFile",
        "callback": "handleFileUpload",
        "label": "Upload File(s)",
        "url": "https://tekcounsel.net/web.shell.sample/upload",
        "httpMethod": "UPLOAD",
        "imageUrl": null,
        "properties": null
    },
    {
        "action": "recordPushToken",
        "callback": "handlePushRegistration",
        "label": "Register for Push",
        "url": "https://tekcounsel.net/web.shell.sample/rest",
        "httpMethod": "POST",
        "imageUrl": null,
        "properties": null
    }
]
</div>

```

screen pic of above configuration (web-shell-bottom-actions)



Configuring the Navigation Menu / Actions

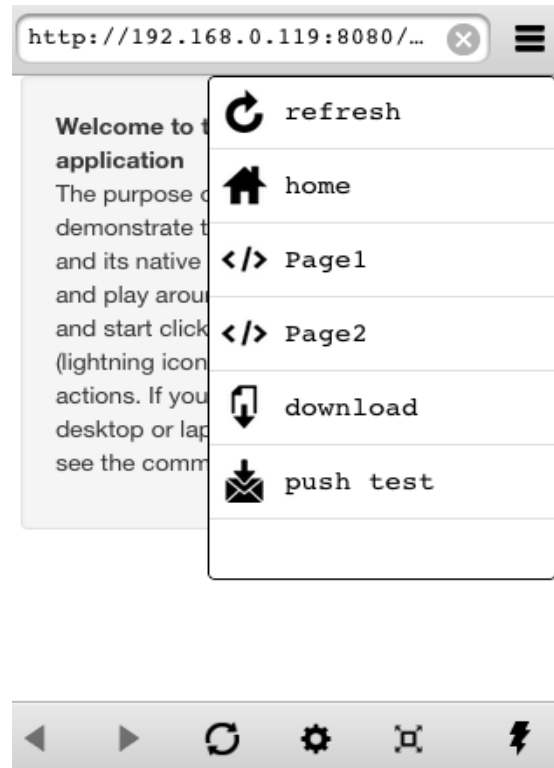
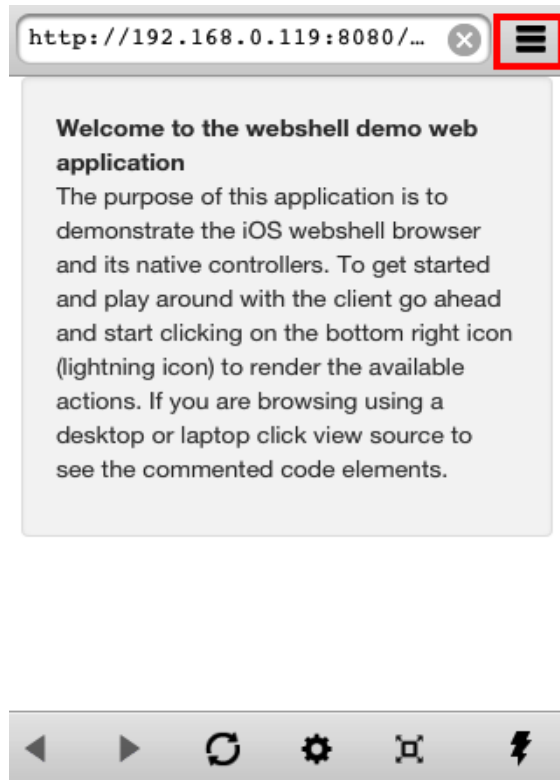
web-shell-top-actions

The navigation action menu provides an easy way to navigate through your site / application. It functions in much the same way as the action sheet configuration.

action	Determines what native modal view controller to load, or what action to perform (i.e. navigate will move to the page listed in the url)
callback	Not typically used in a navigation action, but still can be used if calling up a native modal controller from the top nav menu.
label	text rendered on the action sheet button
url	Link to a web page.
httpMethod	UPLOAD has special meaning to webshell. It will post a file using multipart/form-data (use the recommended httpMethod for each action below)
imageUrl	If the action is rendered in the top right drop down menu, an image can be specified to render next to the label.
properties	Any extra properties supported by this particular action.

```
<div id="webshell-top-actions" style="display: none">
[
  {
    "action": "refresh",
    "callback": "refresh",
    "label": "refresh",
    "url": "",
    "httpMethod": "GET",
    "imageUrl": "https://tekcounsel.net/web.shell.sample/images/refresh.png",
    "properties": null
  },
  {
    "action": "navigate",
    "callback": null,
    "label": "home",
    "url": "https://tekcounsel.net/web.shell.sample/index.jsp",
    "httpMethod": "GET",
    "imageUrl": "https://tekcounsel.net/web.shell.sample/images/home.png",
    "properties": null
  },
  {
    "action": "navigate",
    "callback": null,
    "label": "Page1",
    "url": "https://tekcounsel.net/web.shell.sample/page1.jsp",
    "httpMethod": "GET",
    "imageUrl": "https://tekcounsel.net/web.shell.sample/images/code1.png",
    "properties": null
  },
  {
    "action": "navigate",
    "callback": null,
    "label": "Page2",
    "url": "https://tekcounsel.net/web.shell.sample/page2.jsp",
    "httpMethod": "GET",
    "imageUrl": "https://tekcounsel.net/web.shell.sample/images/code1.png",
    "properties": null
  },
  {
    "action": "navigate",
    "callback": null,
    "label": "download",
    "url": "https://tekcounsel.net/web.shell.sample/filedownload.jsp",
    "httpMethod": "GET",
    "imageUrl": "https://tekcounsel.net/web.shell.sample/images/doc_down.png",
    "properties": null
  }
]
</div>
```

screen pics of above configuration (web-shell-top-actions)



Configuring the webshell properties

webshell-properties

webshell-properties allows the developer to alter the colors fonts / overall theme of the shell to meet their websites color scheme etc.

fontColor	Font color of all static labels/text
hexColor	Background color for UINavigationController and UIToolBar
translation	Simple json data mapping to alter all static labels according to preferred language. The language is driven off the website, defaults to english. (see next page for details)
backgroundColor	Background color of body of native modal controllers
font	Font type for static labels/text
fontSize	Font size for static labels / text
buttonShade	Either light or dark
fullScreen	Determines if web application loads in fullscreen mode after page load.
apikey	Used to keep a running count of licenses. Received at time of purchase.

```
<div id="webshell-properties" style="display: none">
{
  "fontColor": "#FFFFFF",
  "hexColor": "#cccccc",
  "backgroundColor": "#CCCCCC",
  "font": "Courier",
  "buttonShade": "dark",
  "fontSize": "16",
  "fullScreen": "false",
  "apikey": "614fb3f7-fb87-42eb-8273-f5bcffffb4ed"
}
</div>
```


Configuration of Language / Translation

Through the use of a json data file the web developer can configure the static text / labels to render in any language they choose by specifying the url for the json file in the web-shell-properties area (see prior page). Example below of a spanish JSON data file:

```
{
  "AUDIO_STATE_ABOUT_TO_PLAY": "preparándose",
  "AUDIO_STATE_ABOUT_TO_RECORD": "inicializar",
  "AUDIO_STATE_FINISHED_RECORDING": "grabación final",
  "AUDIO_STATE_NO_RECORDING": "ninguna grabación",
  "AUDIO_STATE_PLAYING": "reproducir audio...",
  "AUDIO_STATE_PLAYING_ERROR": "error",
  "AUDIO_STATE_READY": "listo",
  "AUDIO_STATE_RECORDING": "grabación...",
  "AUDIO_STATE_RECORDING_AVAILABLE": "de grabación disponible",
  "AUDIO_STATE_RECORDING_ERROR": "error",
  "AUDIO_STATE_STOPPED": "detenido",
  "actions": "acciones...",
  "clearHistory": "eliminar hist.",
  "downloadHistory": "descargar",
  "emailLink": "enlace de correo electrónico",
  "emailNotSetup": "El correo electrónico no configurar",
  "error": "error",
  "gettingLocations": "al obtener la localización",
  "gpsMessage": "Datos GPS serán enviados a este sitio. Utilice los ajustes para eliminar / borrar.",
  "history": "historia",
  "historyCleared": "historia eliminada",
  "invalidJsonActions": "acciones no válidas JSON para div WebShell-bottom-acciones.",
  "locationServicesOff": "map may not render correctly if location services are turned off",
  "microphoneAccessDenied": "Acceso denegado micrófono",
  "microphoneAccessDeniedText": "Esta aplicación requiere el acceso al micrófono de su dispositivo. \n\nPor favor enable acceso Micrófono para esta aplicación en Ajustes / Privacidad / Micrófono",
  "no": "no",
  "noCameraFound": "ninguna cámara se encuentra en el dispositivo.",
  "ok": "OK",
  "recordAudio": "grabación de audio",
  "recordPhoto": "fotográfico",
  "recordSignature": "firma de registro",
  "recordVideo": "grabación de video",
  "refresh": "recargar",
  "renderLocation": "localización",
  "restoreDefaults": "reajustar",
  "restoreView": "arrastre hacia abajo la parte superior de la pantalla para restaurar",
  "saveMessage": "guardar los datos?",
  "scanBarcode": "escanear códigos de barras",
  "signatureDoubleTap": "doble tap para restablecer la firma.",
  "uploading": "subida de archivos",
  "yes": "sí"
}
```

Record / Render Location Services JSON Data Structures

Upon accepting / clicking on the recordLocation action the iOS device will starting posting JSON data to the target URL the originating page has configured (see recordLocation in web-shell-bottom-actions). Below is the JSON data structure that is passed to the web server:

recordLocation (posted from device):

```
{  
  
  "longitude" : "-122.14792309",  
  "latitude" : "37.37641444",  
  "direction" : "NW"  
}
```

renderLocation (expected by device from web server):

```
[  
  {  
    "latitude": 28.003455,  
    "longitude": -82.281418,  
    "title": "seffner",  
    "url": "http://google.com"  
  },  
  {  
    "latitude": 28.003455,  
    "longitude": -82.281418,  
    "title": "brandon",  
    "url": "http://google.com"  
  }  
]
```