

Washington State Mobile Solutions: Floor Activity Report

What is the Floor Activity Report (FAR)?

The Floor Activity Report is the public-facing version of the House and Senate floor calendars. FAR is implemented as a web application and provides real-time status of bills as actions are taken on the floor. The mobile capable version of FAR is a re-write of an existing highly-used legacy application. Many considerations were taken in re-writing the application, including adding mobile capability and real-time updates. The FAR provides a way to widely communicate chamber floor activity and is used by legislative members, staff, and the general public during the legislative session.

How can I see it in action?

URL: <http://app.leg.wa.gov/FAR>. The current calendar information in FAR is for the previous legislative session. To see a good example of the information FAR provides, select 2/14/2014 for the House Floor Calendar or 2/17/2014 for the Senate Regular Calendar. Because the Legislature is out of session, you will not see real-time updates. Check back in late February or early March, when the Legislature will be on the floor for debate and final passage of bills in the house of origin.

What were the mobile solution considerations?

The ability to access the latest FAR calendars anywhere, on any device, is important to members and staff. We wanted to provide the necessary information in a mobile-friendly format.

Key Design Points

- Chose to add mobile capability through a web application, not a native app.
 - One code base for all devices.
 - Used MVC and jQuery Mobile.
- Designed the UI Mobile First, and used responsive design to accommodate the largest number of devices possible.
 - Analyzed existing legacy application to determine what content was really needed.
 - Designed for the smallest screen first and then modified for larger devices. All devices contain the same information – elements are presented differently to accommodate a variety of device sizes.
 - Examples:
 - Bill information: used responsive table columns to display the highest-priority items as screen size increased. <http://demos.jquerymobile.com/1.4.4/table-column-toggle/>.
 - Floor status: small screens display the floor status as text, whereas larger screens include the full display board.
 - Navigation: small screens contain calendar navigation off screen (in an off-canvas menu), whereas larger screens include it on screen.
 - Incorporated the three tenets of responsive design: media queries, fluid grid framework, and responsive images.

How were real time updates accomplished?

When an action is taken on a bill, all client browsers are updated automatically without the user refreshing the page.

Key Design Points and Technologies

- We integrated multiple systems to provide real-time updates to the Floor Activity Report.
 - Senate and House Voting Systems (client applications)
 - Provides updates to the current bill being discussed on the floor and votes taken on bills.
 - FAR tracks what is on the display board to indicate which bill is being discussed.
 - When the vote is recorded, the vote totals appear on the FAR and the bill is marked.
 - Workroom System (client application)
 - Provides updates to bill status (i.e., engrossed, substitute flags) and messages sent between chambers.
 - Internal amendment management (web application)
 - Provides updates to any amendments that are added to bills (e.g., adopted, withdrawn).
 - Internal calendar management (web application)
 - Provides updates to bills added to calendars on the fly.
 - Provides updates to the order of consideration (the order in which the bills are heard).
- Microsoft Message Queuing (MSMQ)
 - MSMQ is leveraged to raise events from all integrated external applications (listed above) that the FAR web application is “listening” for.
- ASP.NET SignalR
 - After receiving events (from MSMQ) containing the corresponding updated information, the FAR web application “pushes” out the updates to clients by means of SignalR.
 - <http://www.asp.net/signalr>. “ASP.NET SignalR is a new library for ASP.NET developers that makes developing real-time web functionality easy. SignalR allows bi-directional communication between server and client. Servers can now push content to connected clients instantly as it becomes available. SignalR supports Web Sockets, and falls back to other compatible techniques for older browsers. SignalR includes APIs for connection management (for instance, connect and disconnect events), grouping connections, and authorization.”
 - The SignalR web site provides good documentation and tutorials.
 - Implemented using C# and javascript.

What is next on the horizon for FAR?

We are continually striving to improve our applications to fit member and staff needs as well as provide information to the public. Since the initial release of FAR we have been tracking different areas that we could possibly enhance to provide a better usability experience.

- Continue to add real-time updating to all areas of data displayed within FAR.

- Order of consideration (a list of which bills will be considered next) – we would like to update bill status and vote total here as we do on the bills within FAR calendars.
- Addition of new calendars (on the fly).
- Continue to de-couple system integration.
 - Currently not all system areas leverage MSMQ; some call dependent libraries.