Creating Interactive Web Pages for Non-Programmers
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The Problem
• Modernize public-facing web pages with live and updating data, tables, and charts
• Allow for web page construction by staff with little or no web programming experience
• Setup tools so that web pages can be built for both desktop and mobile clients

The Solution
• Create a custom web page builder that lets users construct pages as a grid of tiled cells
• Create cell types for display (tables, charts) and interaction (buttons, menus)
• Take advantage of table/chart construction interfaces that users already know

System Diagram
Web Browser Clients
- HTML/Javascript
- Google Web Toolkit

Java EE Server (Payara/GlassFish)

Vaadin Toolkit

Display Files
- Live Devices
- Stored Data

Web Page Builder Interface
Creating a Web Page - A user lays out the page as a grid of cells with various sizes and margins. Then each cell is customized to display content as a label, table, graph, image, or video. Or a cell can be a UI element like a button or menu. Special cell types allow for the reuse of table or graph files constructed using other applications.

Associated Desktop Web Page

Mobile Web Application