Chapter 3.21
Containers and Connectors as Elements in a Portal Design Framework

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ABSTRACT
This article defines the standardized elements used in the building blocks portal design framework in detail, as the second in a series of articles on a Portal Design Framework. This article explains the (simple) rules and relationships for combining Containers and Connectors into portal structures. This article shares best practices, examples, and guidelines for effectively using the building blocks framework during portal design efforts.

OVERVIEW OF THE CONTAINER BLOCKS
The building block system includes seven types of Containers, beginning with the Tile at the lowest level of the stacking hierarchy, and increasing (conceptual) size and complexity to include a collection of interconnected Dashboards or Portals, called a Dashboard or Portal Suite. From smallest to largest, the Container blocks are:

- Tile
- Tile Group
- View
- Page
- Section
- Dashboard or Portal
- Dashboard or Portal Suite

Like musicians in a band, the different kinds of Container blocks in the system play different roles in the overall effort to construct dashboards or portals. The smaller (lower in the stacking hierarchy) blocks - Tiles, Tile Groups, and Views—enable the display of content, and support users’ interactions with content. Sections, Dashboards or Portals, and Dashboard or Portal Suites—the larger blocks, that are higher in the stacking hierarchy—enable the navigation, organization, and management of collections of content. Pages
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straddle the middle of the size continuum; they are the largest block whose role is primarily to provide a framework for display of and interaction with dashboard or portal content, and the smallest Container which plays an important navigational / organization role in the system.

The Connectors (described later in this article) ‘hold things together’; thereby creating navigation paths amongst destinations, establishing a tangible architecture or structure, providing referential cues for orientation with the environment, and allowing movement into and out of the environment. The different kinds of Containers work in concert with Connectors to enable the creation of scalable, navigable, and easily maintainable information architectures that support high-quality user experiences.

Each Container definition includes:

- Mandatory components
- Optional components
- Stacking size
- Detailed description
- Example rendering (for illustrative purposes only)
- Rendering description

Tile

- **Mandatory Components: Tile Header, Tile Body**
- **Optional Components: Tile Footer**
- **Stacking Size: 1**

Description

Tiles are the fundamental building block of the dashboard or portal framework. Tiles locate content and functionality within the coherent information and navigation structure of the dashboard or portal environment. Tiles clearly identify the sources and broader contexts of the information or tools they contain (very important in situations where terminology is ambiguous, conflicting or overlapping, or when differing data sources provide differing values for the same metrics), and offer consistent access to convenience functionality such as printing and emailing the Tile contents for use outside the dashboard.

Tiles consist of two required components—a Tile Header and Tile Body—and one optional component—the Tile Footer. Tiles may include multiple Control Bars (note: adding multiple Control Bars can quickly increase development complexity and lower usability levels). The Tile Header contains a mandatory Title, optional Subtitle, mandatory source indicator identifying the origins of the content, and may include buttons or links for Convenience Functionality (described in detail in a subsequent part of this series).

The mandatory Tile Body can contain nearly any form of content. Tiles commonly contain text, charts, tables, interactive maps, scrolling news feeds, RSS consoles, video, slideshows, syndicated XML structured documents, links to documents and resources, and complex transactional functionality. Of course, this is only a small subset of the tremendous diversity of Tile-delivered content available in the rapidly growing libraries of widgets published for Apple’s OSX desktop, Yahoo’s widget platform, Google Gadgets, web desktops such as NetVibes, and the many social networking platforms including FaceBook and MySpace. In the end, the range of content that can appear within a Tile is limited only by imagination and ingenuity.

The optional Tile Footer is a structurally consistent location for contextual links, pointers to related destinations and content. The Tile Footer commonly offers links to additional resources or source data in another format (tab delimited, .pdf, etc.), links to other Tiles, Pages or areas of the Dashboard that provide related content or functionality, links to other applications and environments offering comprehensive functionality or information out of scope for the Tile, etc.