



Usage-Centered Patterns: A Collection of Abstract Design Patterns for Presentation and Interaction Design

Introduction. This collection of design patterns is intended to support practitioners of usage-centered design. It is distinguished by two factors. First, it is task-centered or performance-centered, focusing on patterns supporting user performance of tasks in an efficient, flexible, and convenient manner. Second, these general patterns are expressed in terms of abstract prototypes using canonical abstract components, a medium for modeling the basic form and function of designs independent of details of appearance or behavior and apart from their expression on any given platform or within any particular set of user interface conventions. The collection is purely heuristic and based solely on utility in practice, with no pretense of forming a cohesive or complete “pattern language.” Potential contributions are welcome and should follow the general form and style exemplified here.

Detail View Direct Navigation

Alternate Names: List-Detail Navigation, Detail View Navigation

Area: presentation and interaction design

Keywords: navigation, list view, detail view, collections, information architecture, efficiency, flexibility

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Problem

Supporting flexible, efficient, and convenient exploration by users of a collection of items available both as a list or other ordered collection and as individual items in detail or expanded views.

Issues

The user wants as much information as possible about each item to understand it or to make a decision, but limited screen real estate and/or complex items make it problematic to present all information on all items together in one visual context.

A list view makes it easy for the user to scan successive items but presents limited information. A detail/expanded view for each item provides more complete information but does not in itself facilitate movement among items.

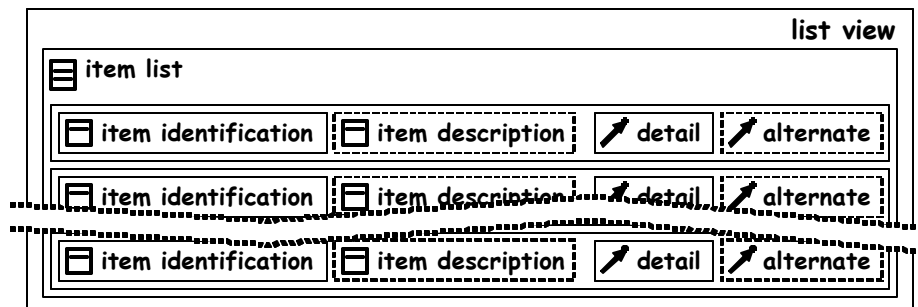
In order to see the next item in detail/expanded view, the user must return to the list view, visually relocate the just-viewed item in the list, then drill-down on the following item to its detail/expanded view. Particularly when the details of many items are potentially of interest, the process is awkward, inefficient, and prone to error because the user can easily click on the wrong item in the list view.

Solution

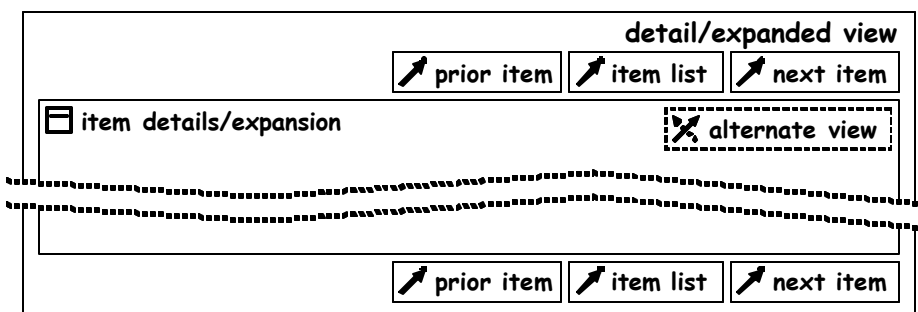
Provide controls on each detail/expanded view for navigation directly to the preceding and succeeding (and possibly other) detail/expanded views.

Structure

The canonical abstract prototypes (Constantine, Windl, Noble, and Lockwood, 2000; www.foruse.com/articals/canonical.pdf) shown below represent the visual organization of the list view and detail/expanded view conforming to this pattern. Optionally, a condensed description or short abstract can be included in the list view as space permits. (See **Surfaced Summary** pattern.)

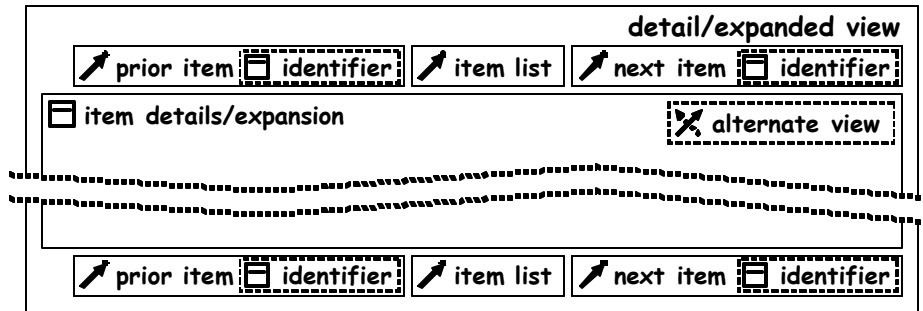


In the detail/expanded view, direct access to the list view is included with the forward and back functions because these are all logically related and belong at the likely focus of user attention when considering where to look next. (If it is preferable for some reason to have the forward and back navigation functions adjacent to each other, the best position for access to the list view would be just above them.) Note that redundant navigation controls are included both above and below the contents of the detail/expanded view. (See **Top-and-Bottom** pattern.)



In some cases, more than one detail/expanded view for an item may be available or it may be available in different formats. For example, a paper may be available in both HTML or Adobe Acrobat formats, or either an abstract or full text might be available. In such cases, access to the alternate views or formats should be surfaced—made directly available—in the list view as well as in the detail/expanded view, where it ideally functions as a toggle if there are only two views. (See **Other Views** pattern.)

An item identifier element associated with the prior and next navigation controls is optional, as shown in the next abstract prototype. It serves as a reminder and to enrich the context for the user, making it more likely that the user will navigate effectively. The identifier could be the name, number, or date of the adjacent item. Screen real estate, implementation problems, and increased complexity to the user must be weighed against the potential value of the added information.



Applications

This pattern applies to any ordered collection of items that can be viewed in either list or collected form or as individual items in a detail or expanded view. Representative examples include back issues of a periodical or serial publication, papers in a series, as well as chapters in a book or articles within an issue of a journal or other publication. For a single issue of a journal or book, the list view is the table of contents and the detail views are the individual articles or chapters. Neither the collection nor the items need necessarily be in text form. For example, the pattern applies to a collection of thumbnail images that can also be viewed in enlarged format. (See **Alternatives and Generalizations** below.)

If each article or chapter is structured as multiple pages, controls for direct article-to-article or chapter-to-chapter navigation need to be supplied independent of forward and back paging. Paging forward beyond the end of an article or chapter should take the user to the first page of the next article or chapter, and paging backward from the beginning should take the user to the last page of the previous article or chapter, exactly as in a magazine or book and in keeping with user expectations.

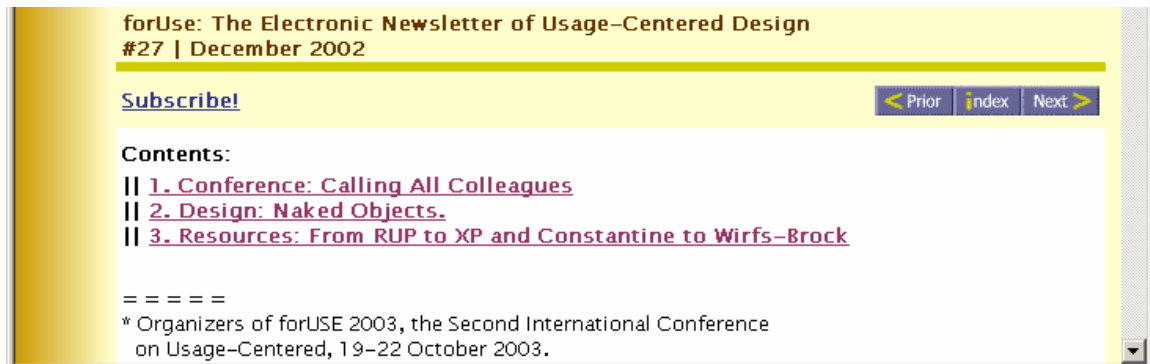
This pattern can also apply to search results, such as in e-business on the Web, enabling the customer to step through full descriptions of potential purchases without having to repeatedly bounce back to the search page. Similarly, a customer should be able to step through descriptions of successive products within a product category without having to jump back up a level in the product hierarchy.

Example

An example of this pattern can be found in the newsletter archives from www.foruse.com.

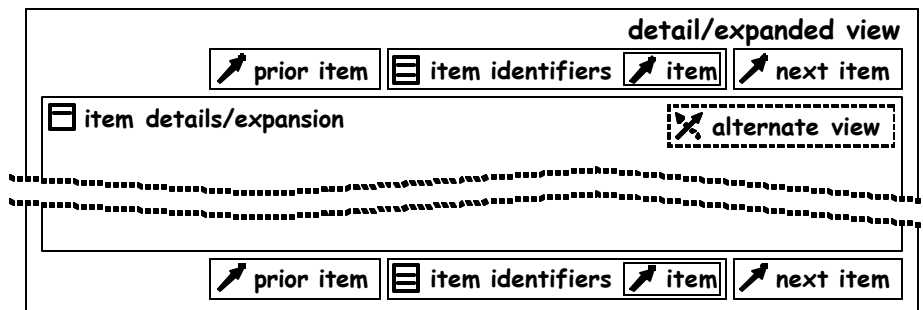
To browse the archives by issue or by topics, click on the column headers -

Issue/Date ▾	Topics/Contents
#28/Jan03	Instructive Interaction Short Answers and Details Granularity in Task Models: Task Cases and Use Cases Naked Objects Update Also: Upcoming conference presentations.
#27/Dec02	Naked Objects on the User Interface Also: forLSE 2003 Call for Proposals. forLSE2002 Proceedings.
#26/Oct02	Component Selection: Picking the Parts for User Interfaces



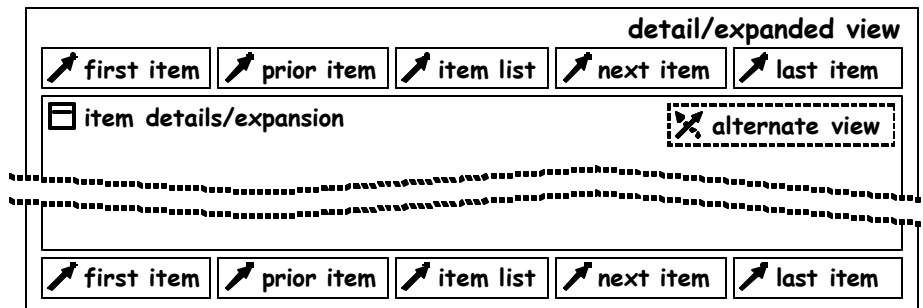
Consequences

1. This pattern simplifies and speeds the scanning or perusing of an ordered collection of items.
2. Detail/expanded views are made somewhat more complex visually by the addition of direct navigation controls.
3. Implementation is complicated slightly by the need for each detail/expanded view to know its adjacent neighbors according to the current ordering within the list view.



Variants

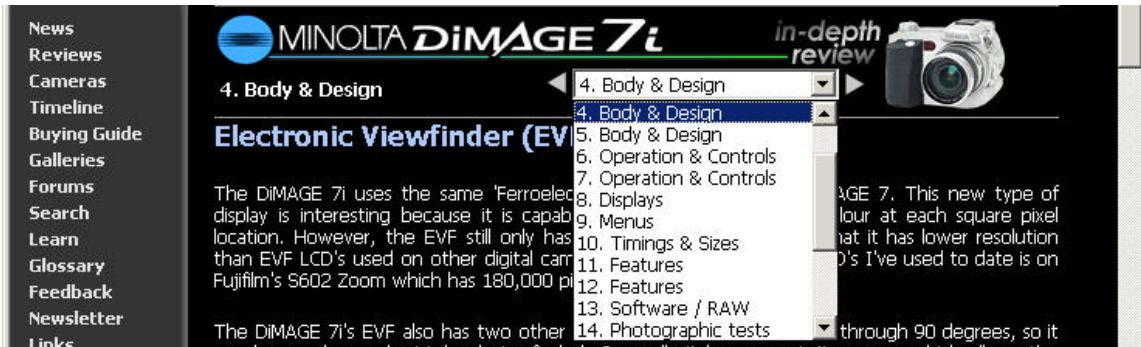
First and last. Based on specifics of the application and a full understanding of user tasks, in some cases it may be justified to provide additional controls that go directly to the first or last item in the collection based on the following model:



Generalized navigator. In some applications there can be a significant likelihood of the user skipping around among detail/expanded views combined with a need for efficient navigation without repeated returns to a list view in a separate interaction context. In this type of

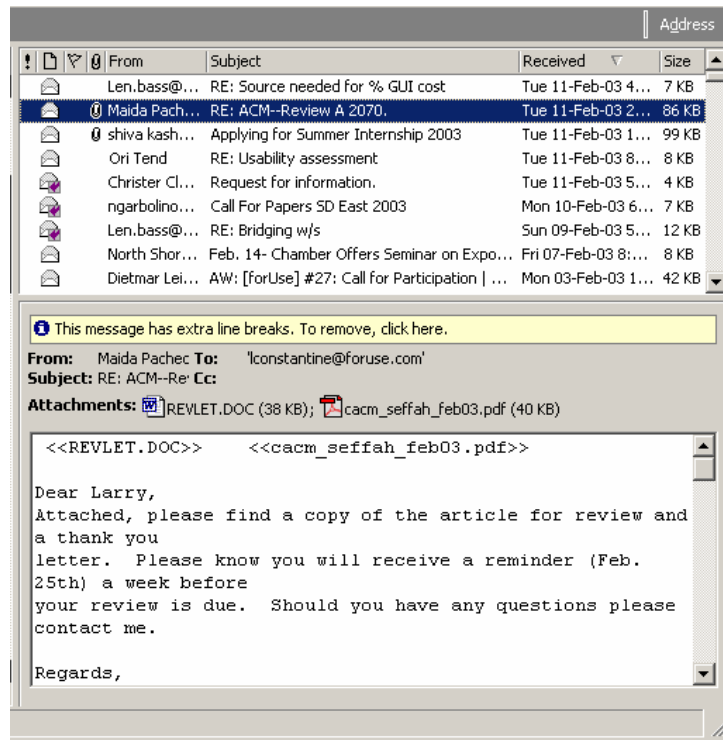
situation, the tool for the access to the list view is altered to surface (contain) the list itself in condensed form, most typically as a drop-down selection list.

This variant is particularly applicable to documents with multiple sections such as within an article or paper. Shown below is an the example from www.dpreview.com:



Composite list and detail views. This concept can be further generalized by incorporating the list view and detail/expanded view as synchronized views within a single composite interaction context. Where screen real estate and performance permit this, this approach provides the most flexibility.

This variant is more familiar in desktop applications than on the Web. A familiar example of this variant of the pattern is found in Microsoft Outlook, as in the portion of a screen shot shown below.



See also: **Other Views, Surfaced Summary, Compound Document, Top-and-Bottom Navigation.**