Selection/User Control

Date Picker

(Calendar Menu)

Id/Track No.: PL_016

Date Created: 5/18/2009

Date Modified: 4/26/2010

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Problem

The user needs to be able to choose and submit a date, or a series of dates. The process would be easier for the user if they can do this selection process by viewing their choices (dates) in a calendar format.

Use When

- The user may not know the exact date.
- The user wants to easily apply a date or date range to an item.
    - This includes instances where the application itself needs to apply date metadata ("date-stamp") a piece of information in order to track, filter, and sort items by date - or date order.
- The user must select a single date in a Form. For example; to select the start and end date in a Booking or to fill in a purchase date for a Warranty/Registration form.
- A date could also be used when performing a Search for Events and/or Promotions – to search before/after a specific date.

  When users need to select a time period, two date selectors can be used, one for the starting date and one for the ending date.

Solution

Use a combination of an edit box and an interactive calendar so that the user can select dates by clicking on the date in the calendar.

Present the user with a month-based click-able calendar:

- Present the days in a table in rows/weeks.
- At the top of the table present an element that allows the user to move to the next/previous month as well as to jump to a specific month.

Layout:

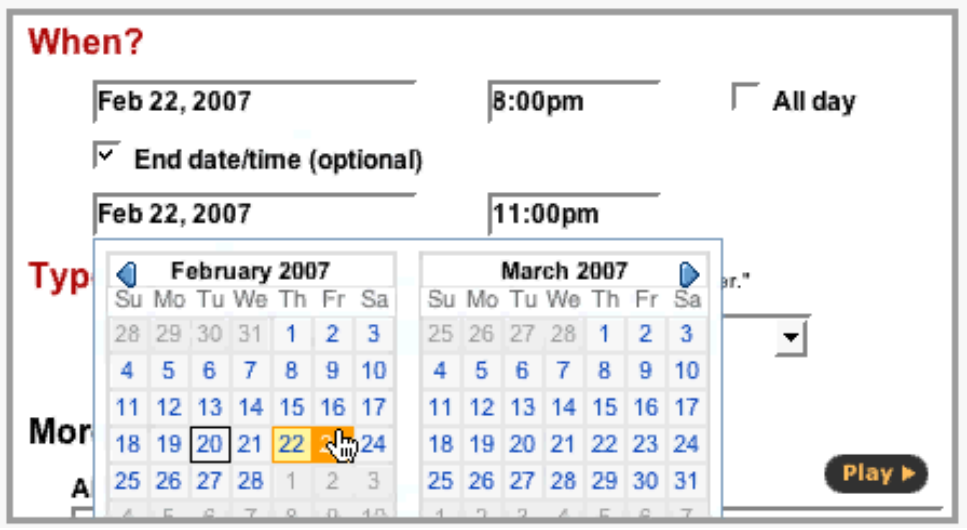
By a specific date:

The default Single month Calendar Widget displays the current month and year.

Users are able to view only one month at a time. Clicking onto the arrow graphics will show the previous or next month.

Between two dates:

Clicking on the arrow graphics shows the next month in the sequence, with the month on the right moving to the left and the next consecutive month occupying the right block.



Interaction:

Selecting a single date:

1. The user is presented a calendar icon as an optional alternative to date selection from the standard date pulldowns.

2. User clicks on the calendar icon and the calendar widget opens below the date form entry fields, so as not to obscure them). The default date selected should be today.

3. The user may select a date from the graphical representation of the calendar by clicking one of the active dates. These may be in the future or the past depending on the scope of the data set or the task at hand. (i.e Selection of a flight when traveling would only show active dates in the future, selection of blog posts available to edit would be in the past.)

4. Clicking on a date in the single month calendar widget, registers that date as an option/constraint for selection and the widget closes.

Selecting a date range in two successive instances of the popup widget:

1. The user is presented a calendar icon as an optional alternative to the first date selection form fields.

2. User clicks on the calendar icon and the calendar widget opens. The default date selected should be today.

3. The user selects a starting date.

4. The user invokes the calendar widget associated with the second date.

5. The system defaults to a date on or subsequent to the first date (not the current date).

6. The user selects an ending date for the range.

7. As each date is selected a highlight or other visual feedback should be indicated to remind the user which date they selected.

8. Once both dates are selected, the system registers the indicated date range as an option/constraint for selection and the widget closes.

Selecting a range of dates in a single instance of the popup widget:

1. The user is presented a calendar icon as an optional alternative to two date selection options from the standard date pulldowns. The default date selected should be today.

2. The user selects a starting date and an ending date to bound a search between two dates. Users are able to view two months at a time. Clicking

onto the arrow graphics should display past or future months one month at a time.

3. As each date is selected a highlight or other visual feedback should be indicated to remind the user which date they selected.

4. Once both dates are selected, the system registers the indicated date range as an option/constraint for selection and the widget closes.

Notes:

Hovering over the calendar icon should change the mouse pointer to a hand symbol.

An affordance for "Go to Today" assists the user when the today's date is not the default.

In some contexts (such as when booking travel or tracking events in the future) the calendar picker should offer a way to scroll forward and back by year.

Default date and month should nearly always be the current month. When choosing a second date in a range from a second individual calendar picker (as with most travel website interfaces), the second calendar widget should default to the date selected with the first widget (as opposed to suggesting the current date).

Display complete weeks, even at the beginning and ends of months. The visible dates from the previous and next months should appear duller or gray but they should also be selectable.

Special Cases

- International considerations: The day of the week label is important because Asia countries may start with the Monday dates in the first column (Mon. - Sun.), whereas Western countries may start with the Sunday dates in the first column (Sun. - Sat.)
- Research indicates that it is better to launch the calendar picker from a calendar icon than to do so directly from the day/month/year fields or dropdowns, but as long as the calendar doesn't interfere with the ability to directly edit the field, and the field stays in focus, invoking from the date-entry form fields is not a problem. (Users do not expect the calendar widget to be invoked from trying to edit the field and they know to use the icon to invoke it, so this should only be done if it can be done in such a way as to not interfere with the behavior users are expecting when they bring focus to the field.)
- Also note that the research finding is conditional. When reasonable defaults can be set for two of the three date attributes (day, month, year), the widget will be in the way when the user is trying to edit just the third.

Rationale

- Moving between days, months, etc. in a calendar picker is fairly intuitive for most users, though care needs to be taken not to have targets that are too small or that move (e.g., when the length of the month name is longer/shorter)

- The calendar widget provides a familiar metaphor to users who may find it easier to select a date or multiple dates using a “traditional calendar” over harder to use interface elements like drop downs and entry fields.

- The use of a calendar/date picker guarantees that there will not be date and spelling mistakes (as long as the code is correct) and cuts down on user entry error.

Accessibility

Developers working on DHTML user interfaces should keep in mind, at the very least, the following techniques:

1. Keyboard support: everything that works with the mouse should also be usable with the keyboard.

2. Follow ARIA conventions when using the tabindex attribute

3. Use consistent and familiar keyboard controls (Tab key, Arrow keys, Enter, and Spacebar)

4. Portal friendliness: Ensure JavaScript is self-contained and properly namespaced

5. Don't use the global namespace

6. Avoid overriding built-in types

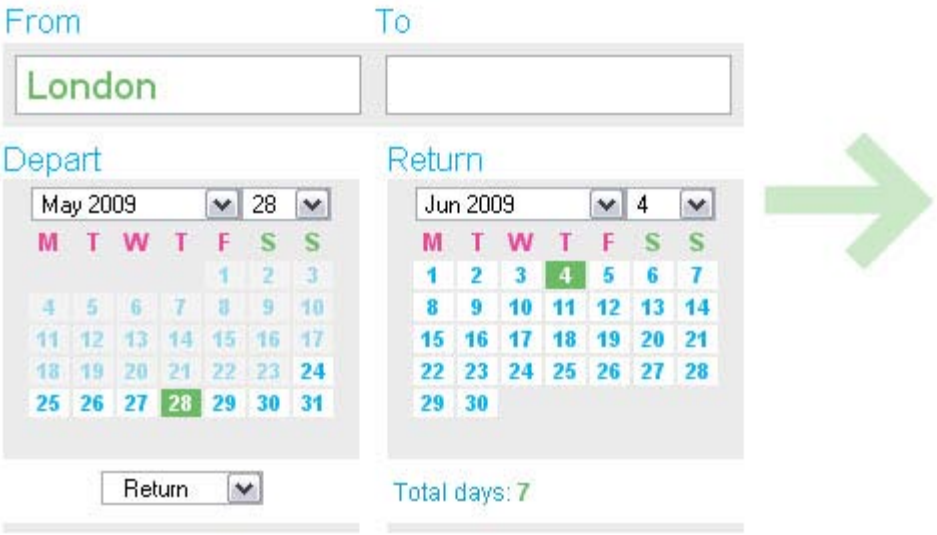
7. Generate unique element ids in your markup

8. Label everything: use ARIA to convey UI semantics

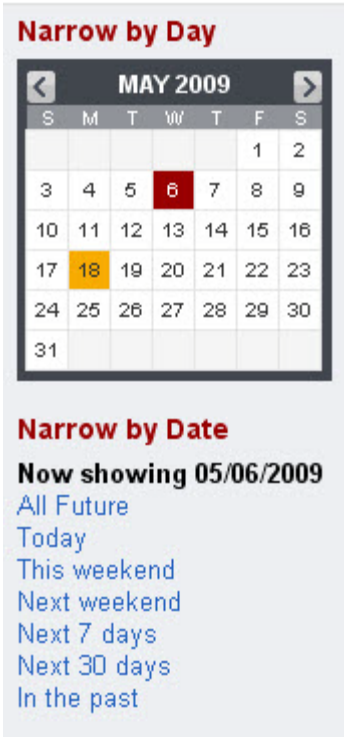
For more details regarding the above list, refer to the article this list was reference from:
http://wiki.fluidproject.org/display/fluid/DHTML+Developer+Checklist

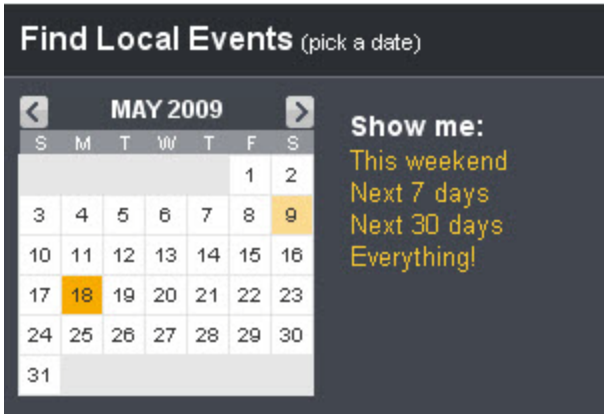
Examples

http://www.openjet.co.uk/index.jsp

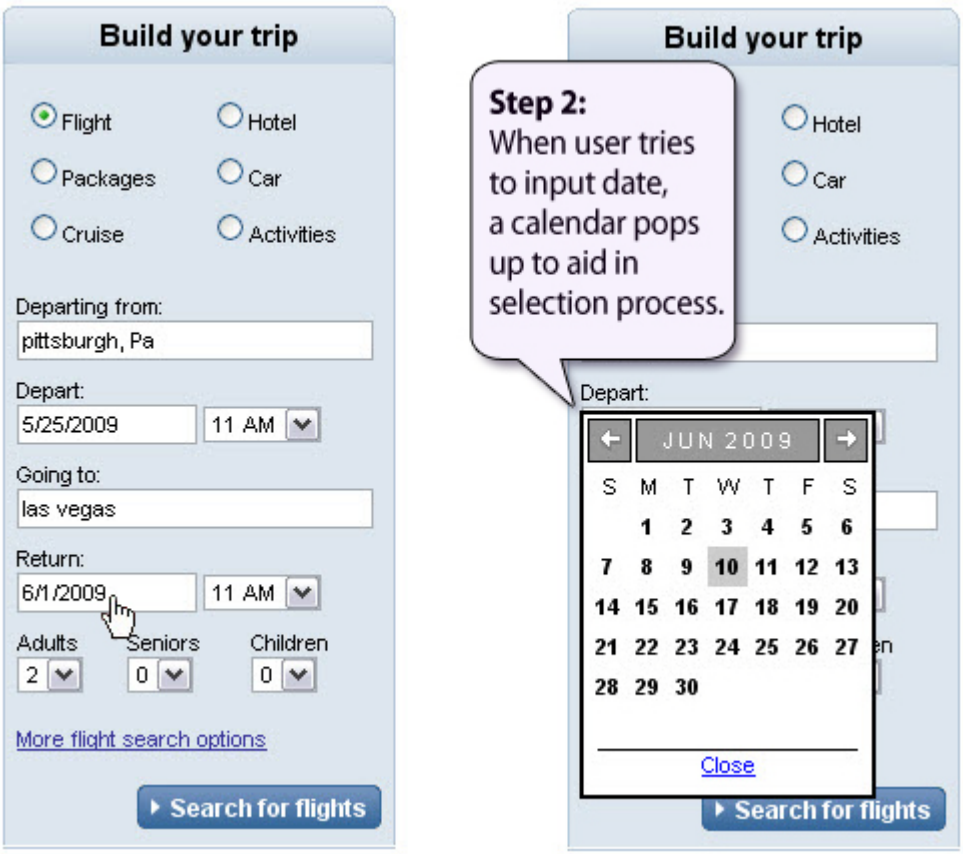


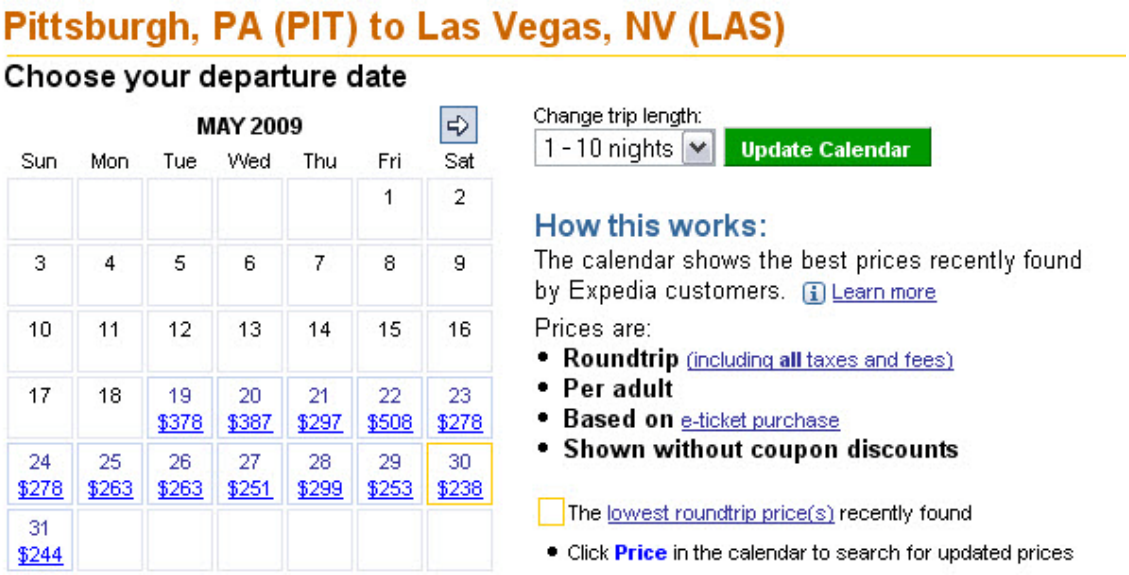
http://upcoming.yahoo.com/search/?search_placeid=ccRZxi6bBZseDHiT&date=5%2F6%2F2009





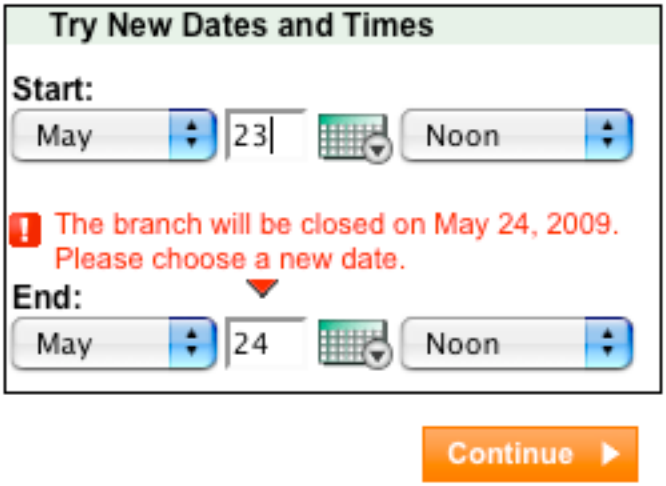
Expedia.com

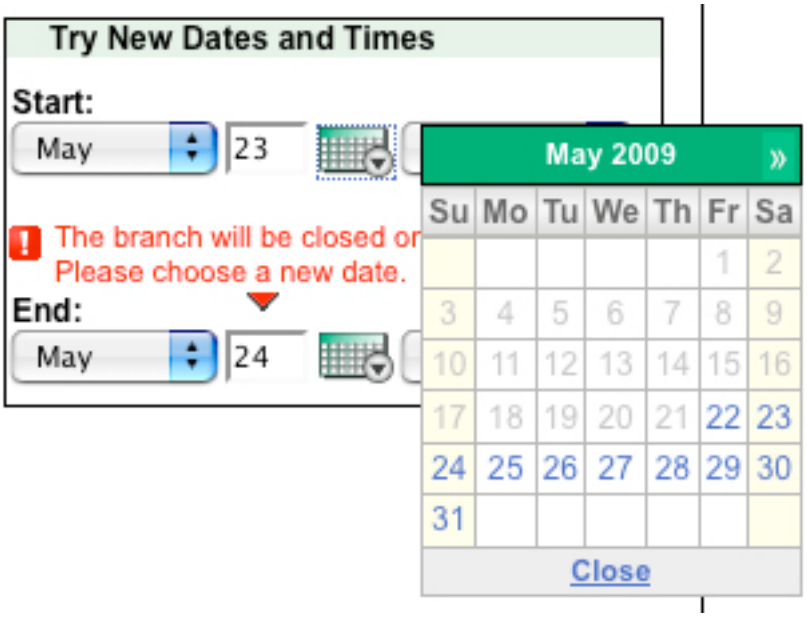

Build your trip
Flight
Hotel
Packages
Car
Cruise
Activities
Departing from:
pittsburgh, Pa
Depart:
5/25/2009
11 AM
Going to:
las vegas
Return:
6/1/2009
11 AM
Adults
Seniors
Children
2
0
0
More flight search options
Search for flights
Build your trip
Step 2:
When user tries to input date, a calendar pops up to aid in selection process.
Hotel
Car
Activities
Depart:
JUN 2009
S M T W T F S
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30
Close
Search for flights


Pittsburgh, PA (PIT) to Las Vegas, NV (LAS)
Choose your departure date
MAY 2009
Sun Mon Tue Wed Thu Fri Sat
1 2
3 4 5 6 7 8 9
10 11 12 13 14 15 16
17 18 19 $378 20 $387 21 $297 22 $508 23 $278
24 $278 25 $263 26 $263 27 $251 28 $299 29 $253 30 $238
31 $244
Change trip length:
1 - 10 nights
Update Calendar
How this works:
The calendar shows the best prices recently found by Expedia customers.
Learn more
Prices are:
Roundtrip (including all taxes and fees)
Per adult
Based on e-ticket purchase
Shown without coupon discounts
The lowest roundtrip price(s) recently found
Click Price in the calendar to search for updated prices

Enterprise Rent A Car

http://www.enterprise.com/car_rental/deeplinkmap.do?bid=019&cnty=US&language=en&arc=GSSB101&cm_mmc=Google-_-Brand-_-GS_SE_Rental_B_NTL_E_US-_-enterprise_car_rental_locations





Resources

James Kalbach, Designing Web Navigation

Welie.com, Date Selector
http://www.welie.com/patterns/showPattern.php?patternID=date-selector

Yahoo Developer Network, Calendar Picker
http://developer.yahoo.com/ypatterns/pattern.php?pattern=calendar&showrevision=true

Accessible DHTML Widget > Picking on the datepicker
http://groups.google.com/group/jquery-ui/browse_thread/thread/9c553e80b94d373a/9ec6cee925b4e420?lnk=gst&q=eli#9ec6cee925b4e420

Key-navigable custom DHTML widgets (Mozilla Developer Center)
http://developer.mozilla.org/en/docs/Key-navigable_custom_DHTML_widgets

DHTML Developer Checklist (The Fluid Project)
http://wiki.fluidproject.org/display/fluid/DHTML+Developer+Checklist

Cross-Reference / Links

Yahoo patterns – slide animation/transition:

http://developer.yahoo.com/ypatterns/pattern.php?pattern=slide

Yahoo patterns – fade in transition:

http://developer.yahoo.com/ypatterns/pattern.php?pattern=fadein

Yahoo patterns – fade out transition:

http://developer.yahoo.com/ypatterns/pattern.php?pattern=fadeout